



Final

**ENVIRONMENTAL ASSESSMENT FOR
DEMOLITION OF LIGHTER THAN AIR (LTA)
BUILDINGS 868, 869, 948, 949**

United States Air Force
1st Fighter Wing

April 2005

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14. ABSTRACT This EA describes the potential environmental consequences resulting from a proposal to demolish four houses in the LTA area. These houses, which are currently vacant, are inconsistent with base architectural standards and Air Force housing standards. Six resource categories received a thorough evaluation to identify potential impacts. Any noise associated with this action would be temporary and limited to daytime hours. Air quality would not be significantly affected, and no ozone-related emissions would occur from this action. Demolition of the houses would be consistent with the Langley General Plan, and any transportation impacts would be minor. As contributing members to the Langley Field Historic District, demolition of the houses would have an adverse effect on Cultural Resources. Consultation with the State Historic Preservation Office has been completed and specifies the mitigation necessary for this action, to include documentation of the resource and other efforts. This action would have no significant effects on ERP sites or water resources. No long term environmental consequences are anticipated.					
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ACRONYMS AND ABBREVIATIONS

1 FW	1 st Fighter Wing	NO ₂	nitrogen dioxide
ACC	Air Combat Command	NO _x	nitrogen oxide
ACM	asbestos-containing material	NRHP	National Register of Historic Places
AFB	Air Force Base	O ₃	ozone
AFI	Air Force Instruction	OSHA	Occupational Safety and Health Administration
Air Force	United States Air Force	Pb	lead
AQCR	Air Quality Control Region	P.L.	Public Law
BMP	Best Management Practices	PM _{2.5}	particulate matter equal to or less than 2.5 micrometers in diameter
CAA	Clean Air Act	PM ₁₀	particulate matter equal to or less than 10 micrometers in diameter
CEQ	Council on Environmental Quality	RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	RMA	Resource Management Area
CFR	Code of Federal Regulations	ROI	region of influence
CO	carbon monoxide	RPA	Resource Protection Area
CZMA	Coastal Zone Management Act	SHPO	State Historic Preservation Office
dB	decibel	SIP	State Implementation Plan
dba	A-weighted decibel	SO ₂	sulfur dioxide
DNL	Day-Night Average Sound Level	SR	State Route
DoD	Department of Defense	U.S.	United States
EA	environmental assessment	USACE	United States Army Corps of Engineers
EIAP	environmental impact analysis process	USC	United States Code
EO	Executive Order	USEPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act	USFWS	United States Fish and Wildlife Service
ERP	Environmental Restoration Program	UST	underground storage tank
ESA	Endangered Species Act	VDEQ	Virginia Department of Environmental Quality
FY	Fiscal Year	VDHR	Virginia Department of Historic Resources
IAP	Initial Accumulation Point	VOC	volatile organic compound
I-64	Interstate 64	VPDES	Virginia Pollutant Discharge Elimination System
IG	Inspector General Office	XP	Plans Office
LTA	Lighter Than Air		
MSL	mean sea level		
NAAQS	National Ambient Air Quality Standards		
NASA	National Aeronautics and Space Administration		
NEPA	National Environmental Policy Act		
NHPA	National Historic Preservation Act		

**FINAL
FINDING OF NO SIGNIFICANT IMPACT/
FINDING OF NO PRACTICABLE ALTERNATIVE**

NAME OF THE PROPOSED ACTION

Demolition of Lighter Than Air (LTA) Buildings 868, 869, 948, 949 at Langley Air Force Base (AFB), Virginia.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Langley AFB proposes to demolish four houses in the LTA section of Langley AFB. These houses were built in the early 1920s and are contributing members of the National Register of Historic Places (NRHP)-eligible Langley Field Historic District. The environmental assessment (EA) also evaluates alternatives that include the relocation of the houses off base to an undetermined location and rehabilitation in place for residential or administrative/office use. The EA also addresses the No Action alternative.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Proposed Action and Alternatives: This EA provides an analysis of the potential environmental consequences associated with the Proposed Action and three alternatives. Six resource categories received thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, neither the Proposed Action nor the three alternatives would result in significant impacts to any resource area.

Land Use Resources: Demolition of the four LTA houses would be consistent with the Langley AFB General Plan and would be conducted in accordance with the goals of the Coastal Zone Management Act. Standard demolition practices would be included in the project demolition to reduce the potential for soil erosion into the Chesapeake Bay watershed. No conflicts with existing on-base land uses would result from the demolition. Under the Proposed Action, on-base roads may experience lane closures temporarily during demolition activities. In all cases, the contractor would provide signage and detours to maintain access to this area for base personnel. It is possible that truck traffic may lead to some degradation of base road surfaces and occasional congestion at the West Gate. No significant adverse environmental consequences would be expected. Under the Relocation and Rehabilitation alternatives, temporary, insignificant impacts to transportation could occur during the process of moving the structures through the base, or from construction activities, but no long term effect is anticipated.

Cultural Resources: Adverse impacts to historic properties proposed for demolition are likely to occur under the Proposed Action. Buildings 868, 869, 948 and 949 are contributing members of the NRHP-eligible Langley Field Historic District. Consultation with the Virginia Department of Historic Resources (DHR), in compliance with Section 106 of the National Historic Preservation Act (NHPA), has been completed for the Proposed Action. A Programmatic Agreement (PA) with the State Historic Preservation Office specifies measures

that include detailed photographic and architectural recordation of the houses and maintenance of the records in perpetuity. Additionally, the PA stipulates that the Air Force would seek funds to rehabilitate Facility 700, the old base fire station and a contributing building to the historic district, feature historic structures in its annual Historic Preservation Week, and ensure that new construction is consistent with the Langley AFB architectural standards for construction within the Langley Field Historic District. Impacts to archaeological resources are not expected under the Proposed Action nor will there be impacts to traditional resources at Langley AFB.

Implementation of either of the two Action alternatives would include exterior rehabilitation that would be conducted in consultation with Virginia DHR, in compliance with a PA for the project. The rehabilitation would be in keeping with the architectural standards of the Langley Field Historic District and the *Secretary of the Interior's Standards for Treatment of Historic Properties*. Impacts are not expected to be adverse. Demolition and or renovation activities, if undertaken, are not expected to impact archaeological or traditional resources under the Proposed Action or either of the two Action alternatives, as the project area has been inventoried for archaeological resources. However, in the event of the discovery of unanticipated cultural resources, the contractor will follow procedures identified in the Langley AFB ICRMP (2004b) in accordance with the NHPA and Air Force regulations.

Water Resources: Demolition of the four buildings would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay with the adoption of standard sediment control and erosion practices. The majority of Langley AFB is located within the 100-year floodplain. There is no practicable alternative to conducting the Proposed Action in the floodplain of Langley AFB. No significant adverse environmental consequences are anticipated from the demolition.

Hazardous Materials and Waste Management: Demolition of the four LTA buildings facilities would not disturb any Environmental Restoration Program (ERP) sites on Langley AFB. Hazardous waste generated during the demolition process would be managed in compliance with the Langley AFB Hazardous Waste Management Plan and no significant adverse impacts are anticipated. Demolition activities would generate solid wastes that would be recycled if possible or otherwise disposed of at a landfill. Landfill capacity would not be significantly altered with the implementation of the Proposed Action. Under the Action alternatives, the contractor is not expected to require the use of hazardous materials, nor is the generation of hazardous waste expected during house relocation or rehabilitation. Removal of asbestos-containing materials or lead-based paint found in or near the renovation areas would follow Federal and State regulations. Rehabilitation (Alternative 2) would generate solid wastes, but is not expected to have a significant impact to the operating life of any landfill.

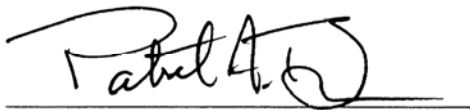
Noise: Demolition of the four LTA buildings would have temporary, localized noise effects during the demolition phase. These localized noise increases may disrupt base personnel in nearby structures. Because the noise disruptions would be temporary and would be limited to daytime hours, impacts are considered insignificant. The same holds true for both Action alternatives.

Air Quality: Demolition-related air emissions would be generated both on base and within the region with the actual demolition, hauling of demolition waste from the base and from other related earth-moving activities. These emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a maintenance area for ozone; however, the Proposed Action would not contribute ozone-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for ozone. Therefore, a formal air quality conformity determination is not required. Under both Action alternatives, impacts to air quality are expected to be negligible.

No Action Alternative: Under the No Action alternative, demolition of the four buildings would not take place. No future use of these facilities has been identified.

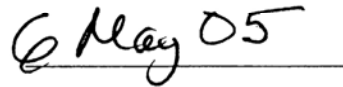
CONCLUSION

Based on the findings of the EA, no significant impact is anticipated from implementation of the Proposed Action or the alternatives. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted and an environmental impact statement is not required. Pursuant to Executive Order (EO) 11988, the authority delegated in Secretary of the Air Force Order (SAFO) 791.1, and taking the above information into account, I find that there is no practicable alternative to this action and that the Proposed Action includes all practicable measures to minimize harm to floodplain environments.



PATRICK A. BURNS

Brigadier General, USAF
The Civil Engineer



DATE

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) describes the potential environmental consequences resulting from a proposal to demolish four houses in the Lighter Than Air (LTA) section of Langley Air Force Base (AFB), Virginia.

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This EA has been prepared by the United States Air Force (Air Force), Air Combat Command (ACC) and the 1st Fighter Wing (1 FW) in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR Part 989, et seq., *Environmental Impact Analysis Process (formerly known as Air Force Instruction [AFI] 32-7061)*.

PURPOSE AND NEED FOR ACTION

The purpose of this action is to align the architectural compatibility standards within the LTA area of Langley AFB and maintain suitable housing structures that are consistent with the land use goals of the base.

To meet this need in the most cost-effective and efficient manner, Langley AFB proposes to remove four Non Commissioned Officers Quarters (NCO) (Buildings 868, 869, 948 and 949). These houses are remnants of an earlier phase of base development and are not consistent with the Langley AFB architectural compatibility standards. The four NCO Quarters have stood vacant for a number of years and would require major renovations in order to meet current net square footage requirements outlined in the *Air Force Family Housing Guide* (USAF 1995) for two to four-bedroom houses for enlisted ranks E-1 through E-9, or for Officer housing. Deficiencies include a lack of formal dining rooms, family rooms, and laundry rooms. In addition, the houses would need to be modified to meet accessibility standards under the Americans with Disabilities Act (ADA) or Commonwealth of Virginia Uniform Statewide Building Code requirements for individual houses (Peyton and Freeman 2004).

PROPOSED ACTION AND ALTERNATIVES

Langley AFB proposes to demolish four houses in the LTA section of Langley AFB. These houses were built in the early 1920s and are contributing members of the National Register of Historic Places (NRHP)-eligible Langley Field Historic District. The EA also evaluates two Action alternatives that include the relocation of the houses off base to an undetermined location and rehabilitation in place for residential or administrative/office use. The EA also addresses the No Action alternative.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This EA provides an analysis of the potential environmental consequences during the demolition associated with the Proposed Action, alternatives consisting of relocation and rehabilitation in place, and the No Action alternative. Six resource categories received thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, demolition of these facilities would not result in significant impacts to any resource area.

Demolition of the four facilities would be consistent with base plans and would be conducted within the consistency objectives of the Coastal Zone Management Act (CZMA). Standard demolition practices would be included in the project to reduce the potential for soil erosion into the Chesapeake Bay watershed. No conflicts with existing on-base land uses would result from the demolition. Under the Proposed Action, on base roads may experience lane closures temporarily during demolition activities. In all cases, the contractor would provide signage and detours to maintain access to this area for base personnel. It is possible that truck traffic may lead to some degradation of base road surfaces and occasional congestion at the West Gate. No significant adverse environmental consequences would be expected.

Adverse impacts to historic properties proposed for demolition are likely to occur under the Proposed Action. Buildings 868, 869, 948 and 949 are contributing members of the NRHP-eligible Langley Field Historic District. Consultation with the Virginia Department of Historic Resources (DHR), in compliance with Section 106 of the National Historic Preservation Act (NHPA), has been completed for the Proposed Action. A Programmatic Agreement (PA) with the State Historic Preservation Office (SHPO) specifies measures that would include Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation and other efforts identified in consultation between the Air Force and the SHPO.

Implementation of either of the two Action alternatives would include exterior rehabilitation that would be conducted in consultation with Virginia DHR, in compliance with a PA for the project. The rehabilitation would be in keeping with the architectural standards of the Langley Field Historic District and the *Secretary of the Interior's Standards for Treatment of Historic Properties*. Impacts are not expected to be adverse. Demolition and or renovation activities, if undertaken, are not expected to impact archaeological or traditional resources. The project area has been inventoried for archaeological resources.

Demolition of the four houses would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay with the adoption of standard sediment control and erosion practices. The majority of Langley AFB is located within the 100-year floodplain. There is no practicable alternative of not disturbing the floodplain with the implementation of the Proposed Action. No significant adverse environmental consequences are anticipated from the demolition.

Demolition, relocation or rehabilitation of the four houses would not disturb any Environmental Restoration Program (ERP) site on Langley AFB. Hazardous waste generated

during the demolition or rehabilitation process would be managed in compliance with the Langley AFB Hazardous Waste Management Plan and no significant adverse impacts are anticipated. Demolition and renovation activities would generate solid wastes that would be recycled if possible or otherwise disposed of at a landfill. Landfill capacity would not be significantly altered with the implementation of the Proposed Action.

Implementation of the Proposed Action or either of the two Action alternatives would have temporary, localized noise effects during the demolition or renovation phases. These localized noise increases may disrupt base personnel in nearby structures. Because the noise disruptions would be temporary and would be limited to daytime hours, impacts are considered insignificant.

Project-related air emissions would be generated both on base and within the region with the hauling of materials and other earth-moving activities with the implementation of the Proposed Action or either of the two Action alternatives. These emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a maintenance area for ozone; however, the Proposed Action would not contribute ozone-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for ozone. Therefore, a formal air quality conformity determination is not required. Both relocation and rehabilitation alternatives would generate even fewer air emissions.

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1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force), 1st Fighter Wing (1 FW) proposes to demolish four houses (Building # 868, 869, 948, and 949). These houses built in the early 1920's would require major renovations and the renovated units would not meet federal accessibility standards, nor provide minimum housing standards as defined by the USAF housing codes. The houses are within the Lighter Than Air (LTA) area of Langley Air Force Base (AFB), Virginia, and are contributing members of the Langley Field Historic District.

This environmental assessment (EA) has been prepared to analyze the potential environmental consequences associated with the Proposed Action and alternatives in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321 *et seq.*). This document was prepared in accordance with the following:

- Regulations established by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508).
- Requirements of the NEPA of 1969, (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR Part 989, *et seq.*, Environmental Impact Analysis Process (formerly known as Air Force Instruction [AFI] 32-7061).

This EA also provides an evaluation of potential coastal zone impacts pursuant to National Oceanic and Atmospheric Administration Coastal Zone Management regulations (15 CFR 930). Consequently, this EA serves as coastal consistency determination documentation with respect to implementation of the Proposed Action or alternatives.

Section 1.2 provides background information that briefly describes Langley AFB. The purpose and need for the Proposed Action are described in Section 1.3. A detailed description of the Proposed Action, two Action alternatives, and the No Action alternative is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of various environmental resources that could be affected by the proposal. Chapter 4.0 describes how those resources would be affected by implementation of the Proposed Action and the Action alternatives, or the No Action alternative. Chapter 5.0 addresses the cumulative effects of the Proposed Action, as well as other recent past, current, and future actions that may be implemented in the region of influence (ROI) for the Proposed Action.

1.2 BACKGROUND

Langley AFB is located approximately 175 miles south of Washington, D.C., near the south end of the lower Virginia Peninsula on the Back River, a tributary of the Chesapeake Bay. Langley AFB is situated in the Hampton Roads Standard Metropolitan Statistical Area, in the City of Hampton, Virginia. Other cities in the area include Newport News, Poquoson, Norfolk, and Portsmouth. As shown in Figure 1-1, the main base occupies 2,883 acres between the Northwest and Southwest Branches of the Back River. The present project is in the LTA area of the northeast base (Figure 1-2).

Langley AFB is headquarters for Air Combat Command (ACC) and home of the 1 FW. ACC is one of eight major commands in the Air Force and is responsible for organizing, equipping, training, and maintaining combat-ready forces at the highest level of readiness. The primary mission of Langley AFB is to provide air operational support to a broad spectrum of aircraft in both peacetime and combat environments. General goals of the base are to sustain the resources and relationships deemed appropriate to pursue national interests, and provide for the command, control, and communications necessary to execute the missions of the Air Force, ACC, and the 1 FW.

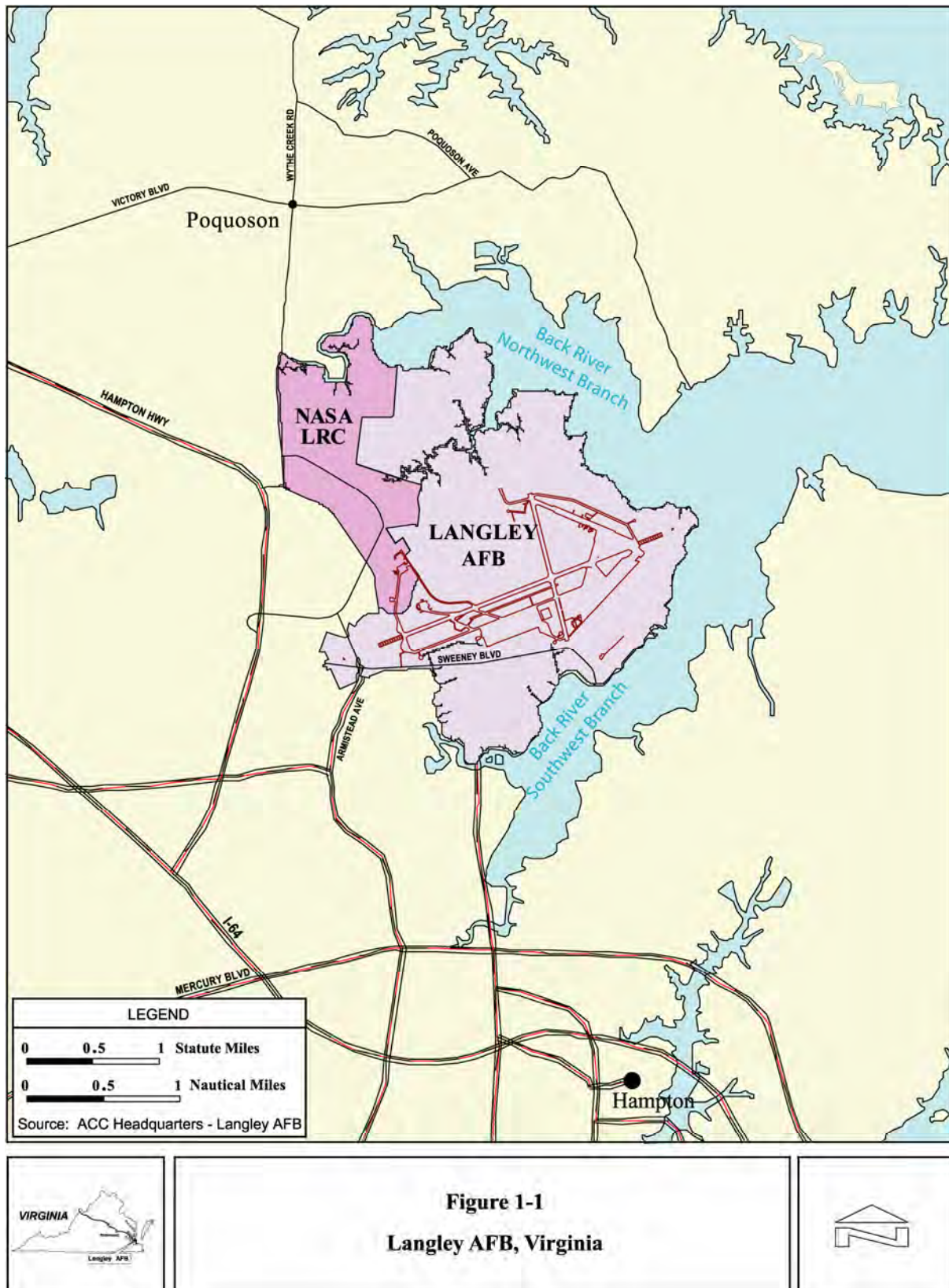
1.3 PURPOSE

The purpose of this action is to align the architectural compatibility standards within the LTA area of Langley AFB and maintain suitable housing structures that are consistent with the land use goals of the base.

1.4 NEED

To meet this need in the most cost-effective and efficient manner, Langley AFB proposes to remove four Non Commissioned Officers Quarters (NCO) (Buildings 868, 869, 948 and 949). These houses are remnants of an earlier phase of base development and are not consistent with the Langley AFB architectural compatibility standards. The four NCO Quarters have stood vacant for a number of years and would require major renovations in order to meet current net square footage requirements outlined in the *Air Force Family Housing Guide* (USAF 1995) for two to four-bedroom houses for enlisted ranks E-1 through E-9, or for Officer housing. Deficiencies include a lack of formal dining rooms, family rooms, and laundry rooms. In addition, the houses would need to be modified to meet accessibility standards under the Americans with Disabilities Act (ADA) or Commonwealth of Virginia Uniform Statewide Building Code requirements for individual houses (Peyton and Freeman 2004).

Figure 1-3 provides a close up map of the building locations. Figures 1-4 through 1-7 are photographs of the two building styles.



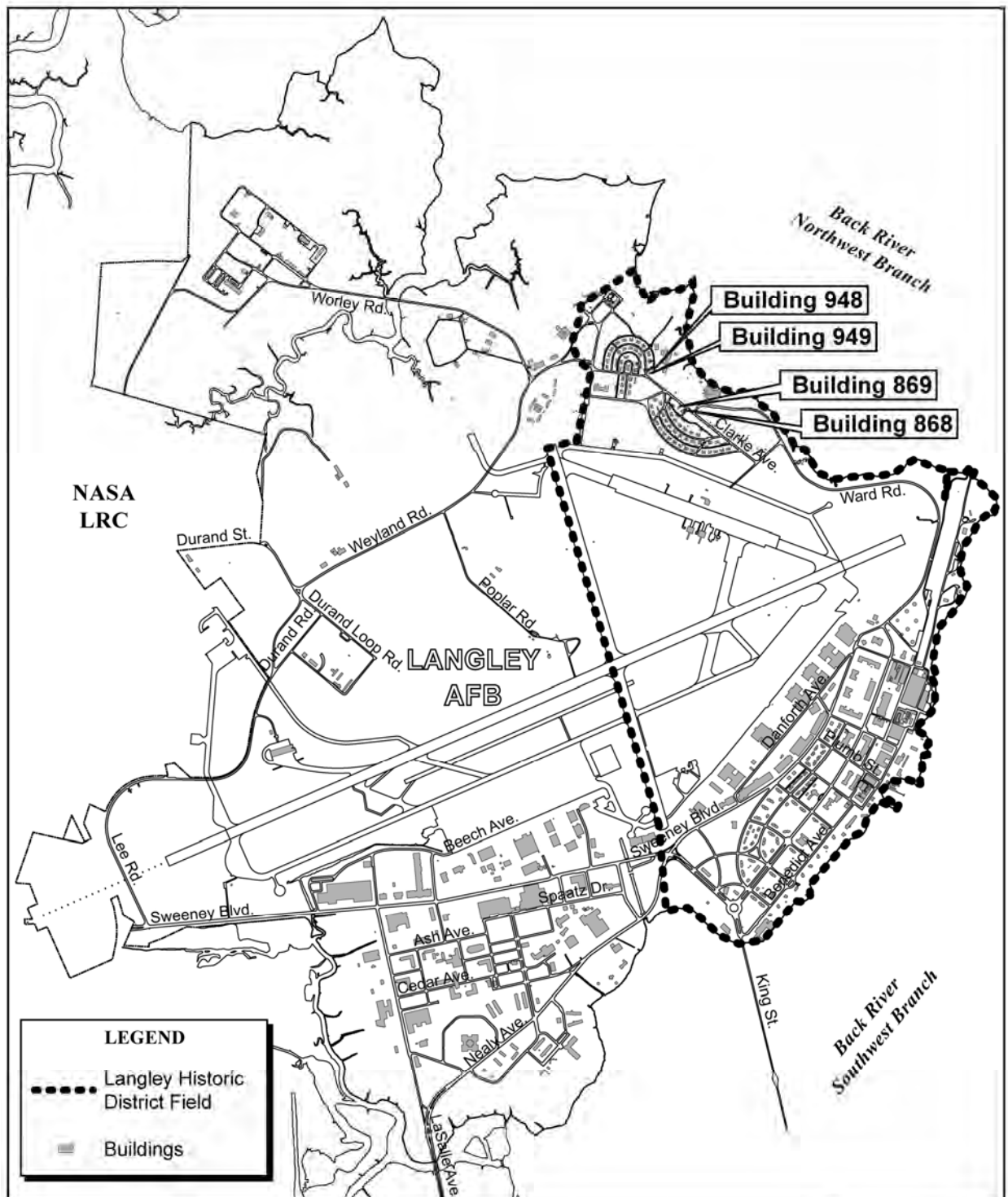
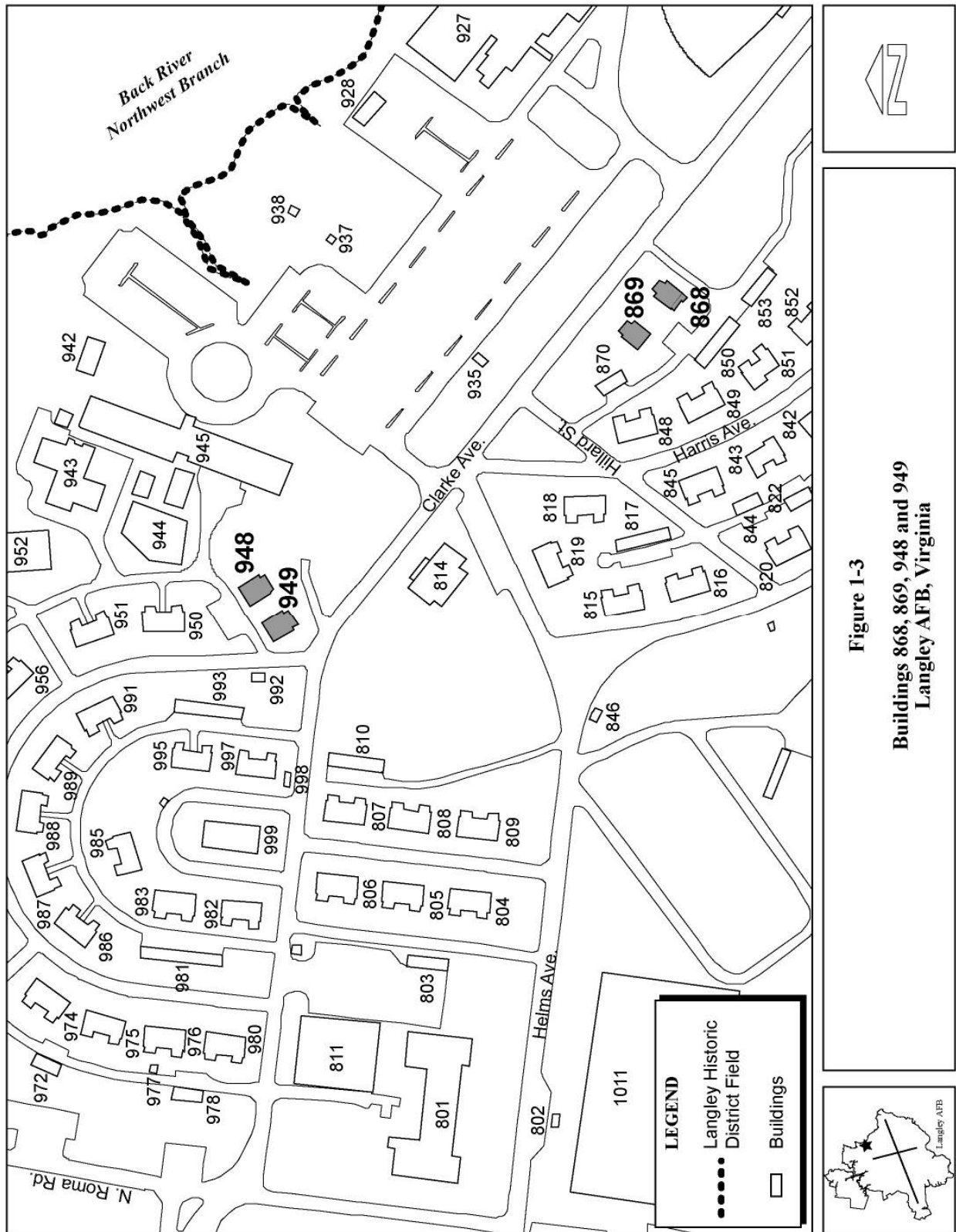


Figure 1-2

**Langley Field Historic District
Langley AFB, Virginia**





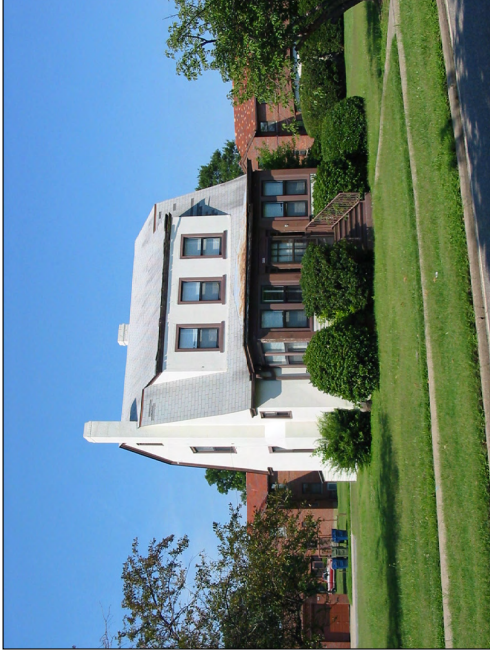


Figure 1-4. Building 869 front elevation.



Figure 1-5. Building 868 rear elevation.



Figure 1-6. Building 948 front elevation.



Figure 1-7. Building 949 rear elevation.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Langley AFB proposes to demolish four houses (Buildings 868, 869, 948, and 949) at Langley AFB, Virginia. This EA evaluates the Proposed Action, two Action alternatives, and the No Action alternative.

2.1 PROPOSED ACTION

The Proposed Action consists of demolition of four houses. Figure 1-3 depicts the building locations.

#868 and #869 – NCO Quarters (former Officers’ Quarters). These 1,266 square foot houses are wood frame with cement stucco finishes, constructed in 1923 as “Type 33” units in the Dutch Colonial Revival style. The original slate roofs have been replaced with asphalt or fiberglass shingles. Asbestos-containing materials (ACMs) are found predominantly in the basements and attics in association with duct attachments and pipe insulation. Limited quantities of asbestos are also present in the composition tile and mastic of the living areas. The presence of lead-based paint is probable based on the age of the houses (Waller, Todd, & Sadler 2002).

#948 and #949 – NCO Quarters (former Enlisted Bachelor Quarters). These 1,410 square foot houses are wood frame with cement stucco finishes, constructed in 1921 as “Type 34 and 35” units (OQMG Plan Number 165) architecturally influenced by the Prairie Style. The houses have their original slate roofs, which are in poor condition. ACMs are found predominantly in the basements and attics in association with duct attachments and pipe insulation. Limited quantities are also present in the composition tile and mastic of the living areas. The presence of lead-based paint is probable based on the age of the houses (Waller Todd & Sadler 2002).

These four houses were initially thought to be designed by the noted architect Albert Kahn. However, subsequent research indicated that, although the houses are compatible in appearance with other Kahn-designed buildings on base, they were actually built from standard military design plans (Peyton and Freeman 2004). As noted in Section 1.3, these houses would require extensive renovations, and none of the four houses meet current ADA accessibility standards or Commonwealth of Virginia accessibility requirements for individual buildings.

Prior to demolition, proper measures would be taken to dispose of any asbestos and lead-based paint present in the four houses in accordance with Federal and state regulations. Demolition would be completed using standard construction equipment such as, bulldozers, excavators, and power shovels. No other method of demolition such as burning or implosion would be employed. Materials from all facilities proposed for demolition would be recycled, to the greatest extent practicable. The demolition contractor would dispose of the remaining materials in an approved landfill in accordance with state and local regulations and utilizing a haul route

for equipment delivery and debris removal established in coordination with the 1 FW. The demolition would involve minimal ground disturbance and any landscaped areas that may be disturbed by the demolition would be restored to prevent any long-term soil erosion. No new facilities are presently planned for construction at these locations.

In 2004, total demolition costs were estimated at \$115,000 for the four houses (personal communication, Baie 2004). The proposed demolition would involve complete dismantling and removal of all building structures, equipment and machinery, in accordance with applicable regulatory requirements to ensure proper handling and disposition of the waste. All utilities would be capped or disconnected. The basements would be filled and graded.

In December 2004, Langley AFB and the Virginia Department of Historic Resources (DHR), which is also the State Historic Preservation Office (SHPO), executed a Programmatic Agreement “*Regarding Treatment of Facilities 868, 869, 948, & 949*” (see Appendix B). This agreement provides stipulations that describe impact mitigations for possible treatments for the four buildings, including the Proposed Action and Alternatives.

2.2 ALTERNATIVE 1: RELOCATE HOUSES

Under this alternative, all four houses would be relocated off base to an undetermined location. The houses would be sold or donated to interested parties who would bear the costs of moving them to a new location. The houses would be prepared for moving by bracing and jacking, and would be transported either by truck or by barge. New footing walls would be prepared by the new owners to receive the houses at the new location; and the houses would be connected to utilities on site. At the old sites on Langley AFB, the basements would be filled, the utilities capped, and the sites graded and seeded.

2.3 ALTERNATIVE 2: REHABILITATE HOUSES

Under this alternative the four houses would be rehabilitated in place for residential or administrative/office use in a manner that retains existing building configurations and historic materials, while complying with building code and safety requirements. Rehabilitation would include roof repair and replacement, stucco repair, room renovation, replacement of existing plumbing and electrical systems, and removal of ACMs, among other actions, depending upon the type of rehabilitation.

Option A: Renovate for Administrative/Office Use. Renovation for administrative or office use would consist of two sub-options that could be adapted to the overall site plans for the renovation of Bayview Towers:

A1. Club/Organization Use. Renovate for office space for base recreational, civic, or club organizational use (requires fewer modifications than A2).

A2. Museum/Retail Use. Renovate for museum use (LTA history), or as a retail facility (requires more modifications than A1).

Option B: Renovate for Housing Use. If the houses are renovated for housing, an addition to the rear of each structure would be necessary in order to meet the minimum size requirements identified in the *Air Force Family Housing Guide* (Air Force 2004a) .(Peyton and Freeman 2004). This addition would be required under both of the following sub-options:

B1: Full Restoration. The four houses would be fully restored to their condition during their primary period of significance (1921 – 1935). Examples of full restoration include, but are not be limited to such measures as restoring slate roofs on houses and flat seam metal roofs on porches; removing modern features such as aluminum-frame windows and replacing them with original style double hung wood windows; and refinishing and restoring original interior wood surfaces, including floors (Peyton and Freeman 2004).

B2. Limited Restoration. The four houses would be rehabilitated to preserve existing configurations and historic materials in a manner that would minimize costs while complying with code and safety requirements, and Air Force intent. For example, rather than slate, roofs would be replaced with high quality fiberglass shingles; carpeting would be installed over existing wood floors (Peyton and Freeman 2004).

Table 2-1 lists estimated renovation costs based on costs identified in the condition survey of the properties (Waller Todd & Sadler 2002), revised for inflation in 2004 (Peyton and Freeman 2004), and escalated at 5 percent for 2005 (Peyton and Freeman 2004). Renovation costs for historical units for ACC are now higher at approximately \$145 per square foot.

Table 2-1. Estimated Rehabilitation Costs, July 2004

<i>Rehabilitation Options</i>	<i>868</i>	<i>869</i>	<i>948</i>	<i>949</i>
OPTION A: ADMINISTRATIVE/OFFICE				
A1. Club/Organization Use	\$212,274	\$218,825	\$271,935	\$280,949
A2. Museum/Retail Use	\$265,343	\$273,531	\$339,919	\$351,186
OPTION B: RESIDENTIAL				
B1. Full Restoration	\$195,474	\$202,025	\$253,035	\$262,049
B2. Limited Restoration	\$150,650	\$157,199	\$196,153	\$205,186
Building Addition (B1 and B2)*	\$ 26,466	\$ 26,466	\$ 26,466	\$ 26,466

* 2002 figures adjusted for inflation as of July 2004

Source: Peyton and Freeman 2004

2.4 NO ACTION ALTERNATIVE

Under the No Action alternative, the proposed demolitions would not occur. The four houses would remain in place and be stabilized until an identified need requires further action. The

houses would remain in the Langley AFB structure inventory and would require expenditures for maintenance and repairs or mothballing in compliance with Section 106 of the NHPA which states that "neglect of a property resulting in its deterioration or destruction," is an adverse effect (Section 800.9 [b]). Table 2-2 lists estimated interim stabilization costs for the four houses. Failure to protect these NRHP-eligible structures from the adverse of effects of neglect would place Langley AFB out of compliance with Section 106 of the NHPA and the Langley AFB CRMP.

Table 2-2. Interim Stabilization Costs*, July 2004

<i>Building 868</i>	<i>Building 869</i>	<i>Building 948</i>	<i>Building 949</i>	<i>Total Cost</i>
\$ 7,800	\$ 7,800	\$ 14,969	\$ 14, 969	\$ 45,538

* Does not include hazardous materials abatement
Source: Peyton and Freeman 2004

2.5 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The environmental impact analysis process (EIAP) includes the review of all information pertinent to the Proposed Action and reasonable alternatives and provides a full and fair discussion of potential consequences to the natural and human environment. The process includes involvement with the public and agencies to identify possible consequences of an action, as well as the focusing of analysis on environmental resources potentially affected by the Proposed Action or alternatives.

2.5.1 Public and Agency Involvement

Due to the minor nature of this action, the public and agency involvement in this environmental analysis process was tailored to potentially affected groups. Consultation with the Virginia DHR regarding the demolition of Buildings 868, 869, 948, and 949 was initiated by the Air Force in January 2004 (refer to Appendix A). The Virginia DHR and the Air Force developed, and signed in December 2004, a programmatic agreement regarding the treatment of the four houses contingent on the alternative chosen as a result of this EIAP (refer to Appendix B). The Air Force also contacted the Virginia Council of Indians, the Hampton History Museum, and the Hampton Historical Society regarding the Proposed Action.

To facilitate public involvement in this project, the Air Force prepared and published a local newspaper advertisement announcing the availability of the Draft EA for public review. The Draft EA was distributed to the Langley AFB library and to libraries in the cities of Hampton and Poquoson, and the York County Library. No public comments were received during the 30-day review period. Publication of the EA also fulfills the Section 106 requirement to provide public notice of the federal undertaking, and to publish the programmatic agreement.

2.5.2 Regulatory Compliance

This EA has been prepared to satisfy the requirements of NEPA (Public Law [P.L.] 91-190, 42 USC 4321 et seq.) as amended in 1975 by P.L. 94-52 and P.L. 94-83. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. In addition, this document was prepared in accordance with 32 CFR Part 989, et seq., *Environmental Impact Analysis Process (formerly known as Air Force Instruction [AFI] 32-7061)*, which implements Section 102 (2) of NEPA and regulations established by the CEQ (40 CFR 1500-1508; 32 CFR Part 989).

The Draft EA was sent to the Virginia Department of Environmental Quality (VDEQ) single point of contact for review and coordination between state agencies. Compliance with the Endangered Species Act (ESA) involves communication with the Department of the Interior (delegated to the USFWS) in cases where a federal action could affect the listed threatened or endangered species, species proposed for listing, or species that could be candidates for listing. The Draft EA was sent to the USFWS, informing them of the Proposed Action. Since no adverse effects are anticipated, further consultation is not anticipated. The preservation of cultural resources falls under the purview of the State Historic Preservation Office (SHPO), as mandated by the National Historic Preservation Act (NHPA) and its implementing regulations. As described in section 2.5.1, a letter was sent to the SHPO informing them of the Proposed Action, and the Air Force further consulted with the Virginia DHR (which is also the Virginia SHPO) in developing and signing a programmatic agreement for treatment of the four houses; the programmatic agreement was signed in December 2004. Appendix A includes copies of relevant coordination letters; a copy of the signed programmatic agreement is in Appendix B.

2.5.3 Permit Requirements

This EA has been prepared in compliance with NEPA; other federal statutes, such as the Clean Air Act (CAA) and the Clean Water Act; Executive Orders (EOs), and applicable state statutes and regulations. Table 2-3 summarizes applicable federal, state, and local permits and the potential for change to the permits due to the Proposed Action or alternatives.

In addition to this EA being prepared for the decision maker and the interested public, it is also a tool for Air Force personnel to ensure compliance with all regulatory requirements from proposal through project implementation.

Table 2-3. Environmental Related Regulations

<i>Type of Permit or Regulatory Requirement</i>	<i>Requirement</i>	<i>Agency</i>
Endangered Species Act	Required to consult on impacts of project implementation on federally listed or proposed threatened and endangered species	U.S. Fish and Wildlife Service; Virginia Department of Game and Inland Fisheries; Virginia Department of Conservation and Recreation (Division of Natural Heritage)
National Historic Preservation Act (Section 106, Section 110)	Consultation with State Historic Preservation Office	Commonwealth of Virginia, Department of Historic Resources
Coastal Consistency Determination	Determine consistency with enforceable policies of Commonwealth's Coastal Zone Management Program	Commonwealth of Virginia, Department of Environmental Quality

2.6 COMPARISON OF ALTERNATIVES

Table 2-4 summarizes the potential environmental impacts of the Proposed Action and alternatives, based on the impact analyses presented in Chapter 4.0. In no instance would the potential environmental consequences be significant with regard to the implementation of the Proposed Action or alternatives.

Table 2-4. Summary of Potential Environmental Impacts of Proposed Action and Alternatives

<i>Resource</i>	<i>Proposed Action</i>	<i>Alternative 1: Relocation</i>	<i>Alternative 2: Rehabilitation</i>	<i>No Action Alternative</i>
Land Use	-	-	+	0
Transportation	-	-	-	0
Visual	-	-	+	0
Cultural Resources	-	-	+	0
Water Resources	-	-	0	0
Hazardous Materials and Waste Management	-	-	-	0
Noise	-	-	-	0
Air Quality	-	-	-	0

- = Adverse, but not significant impact

+ = Positive/beneficial impact

0 = No change

3.0 AFFECTED ENVIRONMENT

This chapter describes relevant existing environmental conditions at Langley AFB for resources potentially affected by the Proposed Action, alternatives, and the No Action alternative described in Chapter 2.0. In compliance with guidelines contained in the NEPA, CEQ regulations, and AFI 32-7061, the description of the existing environment focuses on those environmental resources potentially subject to impacts. These resources and conditions are: land use, including visual and transportation; cultural resources; physical resources, including water and biological resources; hazardous materials and waste; noise; and air quality. The expected geographic scope of potential impacts, known as the region of influence (ROI), is defined for each resource analyzed.

RESOURCES ELIMINATED FROM DETAILED CONSIDERATION

Several resources were not evaluated in this EA because it was determined that implementation of the Proposed Action or the alternatives is unlikely to affect them. These resources include airspace, safety, earth resources, recreation, socioeconomics and environmental justice. A brief explanation of the reasons why each resource has been eliminated from further consideration in this EA is provided below.

Airspace. The Proposed Action and alternatives do not involve aircraft or airspace modifications.

Safety. Implementation of the Proposed Action or alternatives would not create any unique or unusual safety issues during the demolition, removal, or rehabilitation of the four houses. Langley AFB requires as part of each contract that the National Fire Protection Association, Life Safety Code be followed and that the contractor provides barricades, traffic control signs and construction safety signs that conform to the Manual of Uniform Traffic Control Devices for Streets and Highways and the U.S. Army Corps of Engineers safety and health requirements Manual EM 385-1-1.

Earth Resources. Since the demolition involves existing structures, no impacts to earth resources (e.g., soils, paleontological resources) would occur as a result of the Proposed Action or the alternatives. The water resources section addresses erosion concerns.

Recreation. With the implementation of this Proposed Action or alternatives, no change in personnel would occur and no base expansion would occur affecting recreation.

Biological Resources. Demolition and rehabilitation would disturb an area that has been developed or landscaped, currently experiences ongoing human activity, lacks native terrestrial habitat, and exhibits a low level of biodiversity. No wetlands are on or in close proximity to the project area.

Socioeconomics and Environmental Justice. Because implementation of the Proposed Action or alternatives does not include modifications to current manpower authorizations, employment and earnings associated with the Proposed Action and alternatives are not expected to have any significant environmental consequences. Furthermore, the Proposed Action is sited on an existing developed site. Therefore, this resource was eliminated from further analysis

Environmental justice addresses the disproportionately high and adverse human health or environmental effects on minority and low-income populations. Determination of disproportionately high and adverse human health effects are established by identifying the impact on the natural or physical environment and influence on minority and low-income populations. Construction and/or demolition associated with the Proposed Action and alternatives would not create any disproportionately high and significant health and environmental effects on low-income and minority populations on base or in the vicinity of Langley AFB. Therefore, environmental justice was eliminated from further analysis.

3.1 LAND USE

The attributes of land use addressed in this analysis include land use, transportation, and visual resources. Land use focuses on general land use patterns, as well as management plans, policies, ordinances, and regulations. These provisions determine the types of uses that are allowable and identify appropriate design and development standards to address specially designated or environmentally sensitive areas. Transportation addresses roads and circulation. Visual resources present the natural and manufactured features that constitute the aesthetic qualities of an area. The ROI for land use resources consists of Langley AFB.

3.1.1 Land Use

Land uses on Langley AFB are grouped by function in distinct geographic areas. For example, aircraft operations and maintenance facilities are located in the southern portion of the base. The residential areas on base are located along the Back River in the southeastern and northeastern portions of the base. The Proposed Action sites are located in the northeastern portion of the base at 351 and 355 Clarke Ave., and 376 and 378 Deford St. (refer to Figure 1-3). This area is primarily residential. There are currently no plans for the land that would be vacated as a part of the Proposed Action. It is likely that if any facilities are constructed there in the future, they would be residential (personal communication, Baie 2004).

Adopted plans and programs guide land use planning on Langley AFB. Base plans and studies present factors affecting both on- and off-base land use and include recommendations to assist on-base officials and local community leaders in ensuring compatible development. The *Langley General Plan* (Langley AFB 2003) provides an overall perspective concerning development opportunities and constraints.

The base's *Integrated Natural Resource Management Plan* (Air Force 1998a) is used to coordinate natural resource management. The *Cultural Resources Management Plan* (Air Force 2004b) guides decisions affecting base cultural resources. Langley's *Urban Forest Inventory Review and Management Plan* (Davey Resource Group 1997) is an important component of this plan. Trees are an integral component of the base's urban environment with their shade and beauty contributing to the quality of life and moderating the hard appearance of concrete structures and streets. Trees also help stabilize the soil by controlling wind and water erosion, reduce noise levels, and cleanse pollutants from the air. Trees also provide significant economic benefits. Several studies have shown that properly placed trees provide shade and act as windbreaks, helping to decrease energy consumption. Trees return overall benefits and value far in excess of the time and money invested in them for planting, pruning, care, and removal. Langley AFB officials have recognized these benefits and realize the need to protect their investment with a comprehensive, urban forest management program.

The Coastal Zone Management Act (CZMA) was enacted to develop a national coastal management program that comprehensively manages and balances competing uses of and impacts to any coastal use or resource. The CZMA federal consistency requirement, CZMA section 307, mandates that federal agency activities be consistent to the maximum extent practicable with the enforceable policies of a state management program. The federal consistency requirement applies when any federal activity, regardless of location, affects any land or water use or natural resource of the coastal zone. The question of whether a specific federal agency activity may affect any natural resource, land use, or water use in the coastal zone is determined by the federal agency.

The VDEQ oversees activities in the coastal zone of the Commonwealth through a number of enforceable programs. In reviewing the Proposed Action, VDEQ may require agencies to coordinate with its specific divisions or other agencies for consultation or to obtain permits; they also may comment on environmental impacts and mitigation. VDEQ enforceable programs and policies pertain to fisheries management, sub aqueous lands management, wetlands management, dunes management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management.

3.1.2 Transportation

Access to Langley AFB is provided from Interstate 64 (I-64) via Armistead Avenue to the west of the base, and from Mercury Boulevard (United States [U.S.] Route 258/Virginia State Route [SR] 32), via LaSalle Avenue (SR 167) or King Street (SR 278). Langley AFB has a network of streets that provide access to all base facilities. Nealy Avenue begins at the Main Gate and continues northeast through the installation. Sweeney Boulevard is the primary east west corridor linking directly to the West Gate at Armistead Avenue. It has three lanes (center lane reversible) from the gate to the intersection with Nealy Avenue/Hammond Avenue.

3.1.3 Visual Resources

Langley AFB is located in the city of Hampton near the southern end of the lower Virginia Peninsula, between the Northwest and Southwest Branches of the Back River, a branch of the Chesapeake Bay. The base is in the Coastal Plain Physiographic province on Hampton Flat, a nearly flat plain that gently slopes toward the east, with elevations between 5 and 11 feet above mean sea level (MSL).

The main base occupies 2,883 acres of the total site. The largest structures on base are the aircraft operations and maintenance facilities located in the southern portion of the base. National Aeronautics and Space Administration (NASA) operates a facility complex in the northwestern, southern, and southeastern portion of the base. The large wind tunnels and aeronautical test equipment that comprise the NASA facility resemble a large industrial area. A number of older buildings on base give the base a character reflecting its history as an important airbase from the beginning of the aviation era.

Much of the vegetation on base was planted at the time of the base's original construction (circa 1916-1930). Towering oak trees are the dominant species of trees in the Langley Field Historic District. They have been used mainly as street plantings and as decorative plantings around many buildings. The vicinity of the Proposed Action is a residential area landscaped with expanses of grass, trimmed shrubs around the buildings, and several trees.

3.2 CULTURAL RESOURCES

Cultural resources are defined as any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, or religious reasons. They can be divided into three categories: archaeological; architectural/engineering; and traditional.

Archaeological resources are locations where prehistoric or historic activity measurably altered the earth, or produced deposits of physical remains. Architectural/engineering resources include standing buildings, dams, canals, bridges, and other structures of historic significance. Architectural/engineering resources generally must be more than 50 years old to be considered for inclusion in the National Register of Historic Places (NRHP). However, more recent structures, such as Cold War era resources, may warrant protection if they manifest "exceptional significance" or the potential to gain significance in the future. Traditional resources are resources associated with cultural practices and beliefs of a living community that are rooted in its history and are important in maintaining the continuing cultural identity of the community. The ROI for cultural resources consists of Langley AFB and the specific areas associated with the Proposed Action.

3.2.1 Identified Cultural Resources

A total of 18 archaeological sites and many historic architectural resources have been identified within Langley AFB (USACE 2004; ACC 2004b). The immediate project area has no recorded archaeological sites. The nearest archaeological resources are located south of Clarke Avenue. Site 44HT12 consists of moderately to densely scattered artifacts associated with the mid-19th century Lamington Plantation and the decades following until World War II; it is considered potentially eligible for the NRHP (ACC 2004b). Location C-1 (location, in this context, refers to redeposited or single artifacts) is a disturbed scatter of historic artifacts discovered in a utility trench excavation (ACC 2004b). No issues concerning traditional or American Indian resources have been identified at Langley AFB (USACE 2004). No federally recognized Indian tribes or lands are located in Virginia.

The four houses proposed for demolition (Buildings 868, 869, 948, and 949) are single-family houses located in the historic Lighter Than Air (LTA) area of the Langley Field Historic District. Constructed in 1921 and 1923, the houses are part of the early permanent development of Langley Air Force Base and are among the few remaining military housing units representative of the period. As a group, the four houses constitute one third of the remaining facilities from this era. They are the oldest residential units remaining in the LTA (north base) area; all other residential units from this era are in the HTA (south base) area. Table 3.2-1 lists remaining facilities on base from the 1920s.

Table 3.2-1. Langley Field Historic District 1920s-Era Facilities

<i>Building #</i>	<i>Name</i>	<i>Construction</i>	<i>General</i>	<i>NRHP Status</i>
455, 456 460, 461, 461	Officer's Quarters	1920	HTA Area	Contributing in a District
546	Austin Hall	1924	HTA Area	Contributing in a District
580	NACA Wind Tunnel	1924	HTA Area	Contributing in a District
582	NACA Wind Tunnel	1921	HTA Area	Contributing in a District
583a	Maintenance - NACA	1929	HTA Area	Contributing in a District
586	Service Building NACA	1926	HTA Area	Contributing in a District
596	Gas Station Reclamation	1920	HTA Area	Non-contributing
633*	Seaplane Hangar	1921	HTA Area	Contributing in a District
868, 869	Single-Family Housing Units, Officers' Quarters	1923	LTA Area	Contributing in a District
948, 949	Single-Family Housing Units, Enlisted Bachelors' Quarters	1921	LTA Area	Contributing in a District

* To be demolished as part of another action. Source: USACE 2004

Although the four houses are not attributable to the noted architect Albert Kahn, the designs are sympathetic to the Kahn style and are consistent with other structures in the area. The vicinity of the houses is residential, consisting primarily of brick, Colonial Revival duplexes and residential garages. Clarke Avenue is the main circulation route, with pedestrian walkways shaded by trees and lit by Kahn-designed street lamps. Peyton and Freeman (2004) provide a detailed historical context, describing the era with which the four houses are associated.

Houses 868 and 869. These are 1.5-story Dutch Colonial Revival-style cottages. The structure of the houses appears to be stable, with isolated building movement (Peyton and Freeman 2004). The exterior walls are cement stucco on wood lath. Limited cracking and bulging of stucco is visible in isolated locations (Peyton and Freeman 2004). The original slate roof has been replaced with asphalt or fiberglass shingles. Alterations and additions over the years are minor and have a minimal effect on building integrity (Peyton and Freeman 2004).

Houses 948 and 949. These buildings are two-story houses with hip roofs and one-story front porches that reflect Prairie-Style influence (Peyton and Freeman 2004). The exterior walls are cement stucco on wood lath. Limited cracking of stucco is visible in isolated locations. The slate roofs are in poor condition, with missing and loose slates. Alterations and additions over the years are minor and have a minimal effect on building integrity (Peyton and Freeman 2004).

Two recent studies of the four houses present differing conclusions about the condition of the houses. Waller Todd & Sadler's 2002 condition assessment found that the houses had "reached the end of their useful lives." In contrast, Peyton and Freeman's 2004 study found that although the houses are in some disrepair, they are structurally sound, marginally modified from their original design, and retain many of their original character-defining features.

3.3 WATER RESOURCES

Water resources include surface and groundwater features located within the base as well as watershed areas affected by existing and potential runoff from the base, including floodplains. The ROI is defined as Langley AFB and the immediate vicinity.

Surface Water

Langley AFB occupies a flat lowland peninsula with a gentle eastward slope of 1 foot per mile and elevations of 5 to 11 feet MSL within the Atlantic Coastal Plain physiographic province. The base is bounded on the northeast side by the Northwest Branch of the Back River, and on the southeast side by the Southwest Branch of the Back River, which flow into the Chesapeake Bay.

Groundwater

In the Langley AFB area, groundwater occurs in a shallow water table aquifer, an upper artesian aquifer system, and the principal artesian aquifer system. All three aquifers in this area

contain water of moderate to poor quality due to high salinity and total dissolved solids; they have little or no potential for a conventional water supply.

Floodplains

Due to its proximity to the Back River and the Chesapeake Bay, much of Langley AFB lies within the 100-year floodplain. Langley AFB is susceptible to high tide surges during storms and spring tides, and flooding is sometimes severe on the base. Figure 3-1 illustrates the extent of the floodplain on Langley AFB. The Proposed Action sites are within the 100-year flood zone (refer to Figure 3-1).

3.4 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Administration (OSHA); and the Emergency Planning and Community Right-to-Know Act (EPCRA). Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics that could harm people, plants, or animals. Hazardous waste is defined in the Resource Conservation and Recovery Act as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitability, or corrosivity. In addition, certain types of waste are “listed” or identified as hazardous in 40 CFR 263. For the Proposed Action and alternatives, the ROI is defined as Langley AFB.

3.4.1 Hazardous Materials

The majority of hazardous materials used by Air Force and contractor personnel at Langley AFB are controlled through an Air Force pollution prevention process called HAZMART. This process provides centralized management of the procurement, handling, storage, and issuing of hazardous materials and turn-in, recovery, reuse, recycling, or disposal of hazardous materials. The HAZMART process includes review and approval by Air Force personnel to ensure users are aware of exposure and safety risks.

3.4.2 Hazardous Waste

Langley AFB is a large-quantity hazardous waste generator. Hazardous wastes generated during operations and maintenance activities include solvents, metal-contaminated spent acids, and sludge from wash racks. Langley AFB recycles all lubricating fluids, batteries, oil filters, and shop rags. Hazardous wastes are managed in accordance with the *Langley AFB Hazardous Waste Management Plan*, dated 1 August 2001.

Langley AFB operates two separate 90-day Accumulation Points and about 45 Initial Accumulation Points (IAPs). Hazardous wastes are initially stored at IAPs at work locations.

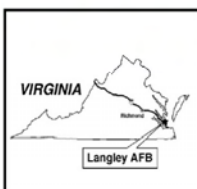
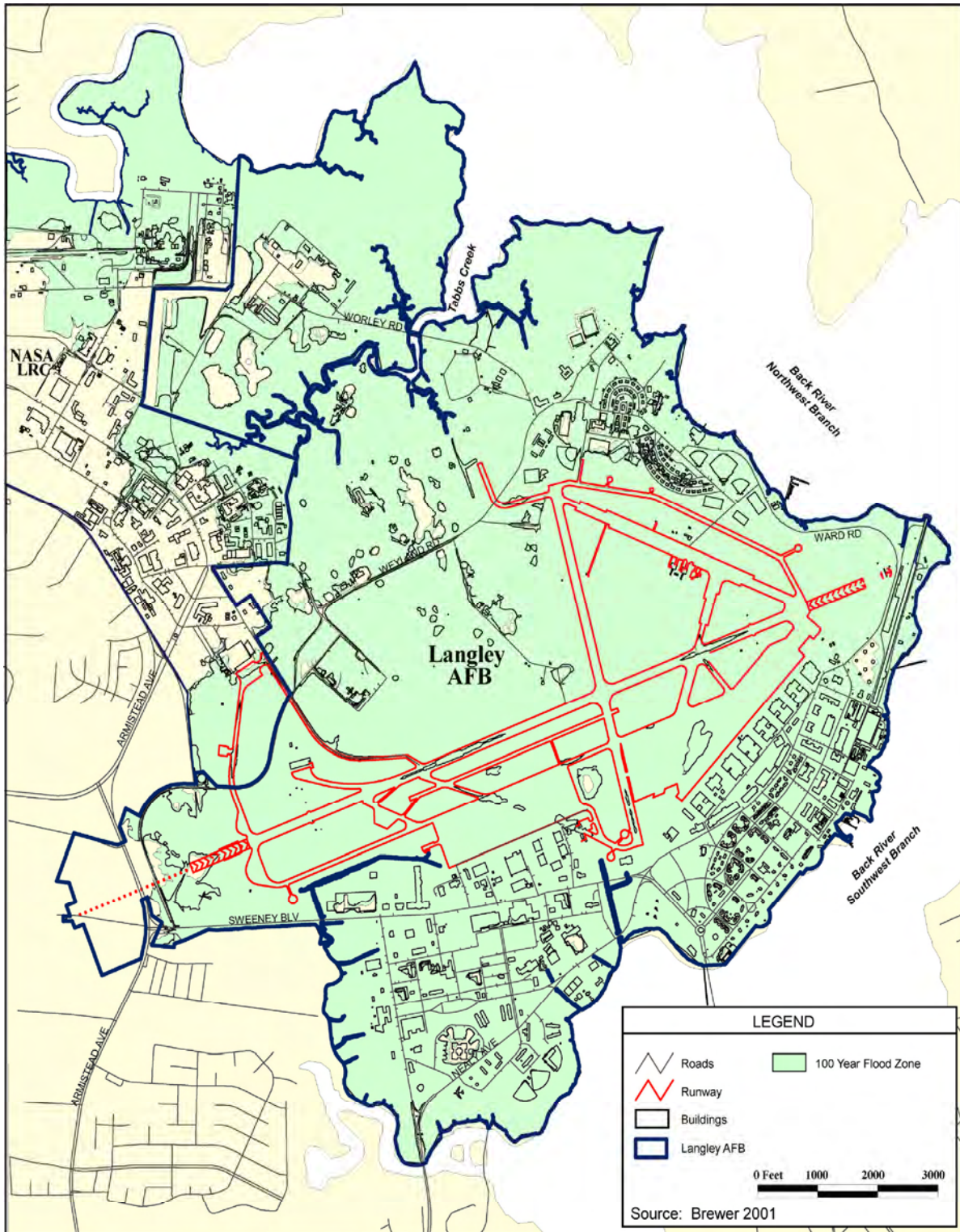
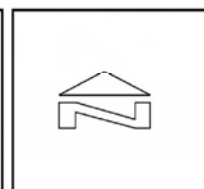


Figure 3-1
Langley AFB Floodplain Map



A licensed contractor transports the wastes from the accumulation points to the 90-day storage facility where they are stored until disposal is economically practicable or before 90 days have expired, whichever comes first. A licensed disposal contractor picks up the wastes and transports it off base for disposal in a licensed disposal facility. Langley AFB disposes of approximately 62,000 pounds of hazardous waste annually (personal communication, Hailey 2002).

Langley AFB has a Spill Prevention and Facility Response Plan (certified in 15 August 2004). The plan meets the Federal Spill Prevention Control and Countermeasures requirements, the Virginia Oil Discharge Contingency Plan requirements and the Coast Guard requirements.

ASBESTOS WASTE/LEAD-BASED PAINT

An asbestos management plan provides guidance for the identification of asbestos-containing materials (ACMs) and the management of asbestos. The 1st FW *Asbestos Management and Operations Plan* (Air Force 2004c) provides guidance on the management of asbestos. An asbestos facility register is maintained by Civil Engineering. Persons inspecting, designing, or conducting asbestos response actions in public or commercial buildings must be properly trained and accredited through an applicable asbestos training program. The design of building alteration projects and requests for self-help projects are reviewed to determine if asbestos contaminated materials are present in the proposed work area and, if so, are disposed of in an off-base permitted landfill. Asbestos testing has identified that pipe insulation, duct liner, duct isolation assemblies, floor tile mastic, joint compound and debris in the basement and crawl spaces within these houses contain asbestos in amounts exceeding the allowable standards.

The 1st FW *Lead-Based Paint Management and Operations Plan* (Air Force 2004d) contains policies and procedures associated with the management of lead-based paint. The plan is designed to establish operations and management organizational responsibilities and procedures so that personnel at Langley AFB are not exposed to excessive levels of lead-contaminated dust or soils. Plan components identify management actions for worker training, notification, and labeling, the Langley AFB Work Request program, record-keeping, personal protective equipment, construction inspection, the disposal of LBP-containing wastes, and lead toxicity investigations. The existing painted wood trim, doors, and walls in these houses are coated with lead paint.

STORAGE TANKS

No known active or inactive storage tanks are located within the area immediately surrounding the four houses. Two 1,000 gallon diesel underground storage tanks (USTs) were located near Buildings #869 and #949. These two tanks were utilized by all four houses. These tanks were removed in August, 2001 and April, 1998 respectively. Underground piping from these tanks to the houses still remains, as does the possibility of soil contamination.

ENVIRONMENTAL RESTORATION PROGRAM

The Department of Defense (DoD) developed the Environmental Restoration Program (ERP) to identify, investigate, and remediate potentially hazardous material disposal sites that existed on DoD property prior to 1984. Forty-eight ERP sites, including one at Bethel Manor Housing, have been identified since the ERP began at Langley AFB. In addition, eight areas of concern (AOCs) have also been identified. Of the 48 sites, 37 have been closed or require no further action, seven ERP sites are in the cleanup phase, and four sites are under study. The *Langley AFB ERP Management Action Plan* (Air Force 2003) summarizes the current status of the environmental programs and presents a comprehensive strategy for implementing actions to protect human health and the environment. This strategy integrates activities under the ERP and the associated environmental compliance programs that support full restoration of the base.

ACC policy requires that any proposed project on or near a Langley AFB ERP site be coordinated through the Langley ERP Manager. There are no ERP sites in close proximity to the project location.

3.4.3 Solid Waste Management

Solid waste generated on Langley AFB is removed by contract services to either the City of Hampton's Bethel Sanitary Landfill or to the Hampton Waste-to-Energy facility for incineration. In Fiscal Year (FY) 2003, the base generated 3,685 tons of solid waste and diverted 1,928 tons through recycling and composting activities. The base also generated 4,131 tons of construction and demolition debris and was able to recycle 2,890 tons of the debris. Big Bethel is a sanitary landfill, but also accepts construction and demolition waste. In 2003, this facility received 574,386 tons of waste of all types. With a total capacity of about 27,953,000 tons, it has a remaining life of about 49 years (VDEQ 2004). In addition, there are four dedicated construction/demolition waste disposal landfills in the Hampton Roads area (Table 3.4-1). Their combined capacity is 1,970,686 tons. These facilities together received 284,162 tons of construction and demolition waste in 2003, and have a collective remaining useful life of about 6.1 years.

**Table 3.4-1. Capacity, Disposal Rates, and Remaining Useful Life (RUL)
for Construction-Demolition Waste Disposal Facilities in Hampton Roads**

<i>Name</i>	<i>Permit</i>	<i>Location</i>	<i>Capacity (tons)</i>	<i>2003 Disposal (tons)</i>	<i>RUL</i>
Craney Island Landfill	041	Portsmouth	1,279,970	75,267	17.0
Higgerson-Buchanan Inc.	493	Chesapeake	593,516	133,640	4.4
Waltrip Landfill	322	James City	7,200	3,929	1.8
Wolftrap Inc. Debris Landfill	436	York	90,000	71,326	1.3
Total for Hampton Roads			1,970,686	284,162	6.1 ¹
Total for Virginia			18,054,541	2,455,035	7.4

Note: 1. This is the combined (average) RUL for the four facilities, not the sum of their individual Rules.
Source: Commonwealth of Virginia Department of Environmental Quality, June 2004

3.5 NOISE

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies according to the type and characteristics of the noise source, distance between source and receptor, receptor sensitivity, and time of day. The ROI for noise includes the area surrounding the project location.

Sound is measured with instruments that record instantaneous sound levels in decibels (dB). A-weighted sound level measurements (often denoted dBA) are used to characterize sound levels that are heard especially well by the human ear. All sound levels analyzed in this EA are A-weighted; thus, the term dB implies dBA unless otherwise noted.

At Langley AFB, noise contributions from aircraft operations and ground engine run-ups at the airfield have been calculated using the NOISEMAP model, the standard noise estimation methodology used for military airfields. NOISEMAP uses the following data to develop noise contours: aircraft types, runway utilization patterns, engine power settings, airspeeds, altitude profiles, flight track locations, number of operations per flight track, engine run-ups, and time of day. The *Final Environmental Impact Statement for the Initial F-22 Operational Wing Beddown* indicates that the Proposed Action site would be in the 70-75 Day-Night Average Sound Level (DNL) noise contour (Air Force 2001c).

3.6 AIR QUALITY

Air quality is described by the atmospheric concentration of six pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter equal to or less than 10 micrometers in diameter (PM₁₀), and lead (Pb). Langley AFB is located within the Hampton Roads Intrastate Air Quality Control Region (AQCR) #223. The Hampton Roads AQCR includes four counties (York, James City, Isle of Wright, and Southampton), as well as nine independent cities (Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg). This area includes substantial industry, several military and commercial airfields, and a large population that generates air quality emissions. Table 3.6-1 summarizes the baseline emissions (stationary and mobile) of criteria pollutants and precursor emissions for this AQCR. Baseline Langley AFB emissions are incorporated into the totals for the AQCR. For each criteria pollutant, Langley AFB contributes less than 1 percent of the regional emissions. The base has been issued a Synthetic Minor operating permit from the VDEQ.

Air quality in Hampton Roads AQCR is currently designated as attainment for all criteria pollutants. For ozone and its precursor pollutants (volatile organic compounds [VOCs] and nitrogen oxides [NO_x]), the affected area is considered in "transitional attainment" or "maintenance." On April 15, 2004, the USEPA designated the City of Hampton as marginal non-attainment for the newly established 8-hour O₃ standard, effective as of June 15, 2004. The USEPA will revoke the 1-hour O₃ standard in July 2005 (USEPA, 2004a). Also, monitoring data

is being collected for determining compliance with the newly developed standard for particulates less than 2.5 micrometer in diameter (PM_{2.5}). The Commonwealth of Virginia has recommended that, based on the most recent three years of monitoring data, the entire state be designated as attainment for the PM_{2.5} standard. The USEPA intended to make promulgate its official designations in December 2004 (USEPA 2004b), but has not yet completed this process.

Table 3.6-1. Baseline Emissions for Langley AFB Affected Environment

<i>Emissions</i>	<i>Pollutants (tons per year)</i>				
	CO	VOCs	NO _x	SO ₂	PM ₁₀
Hampton Roads AQCR ¹	257,325	79,750	83,560	110,220	49,860
Langley AFB	768.09	115.18	283.38	6.47	10.29
---Stationary Sources ²	7.19	10.68	42.18	0.87	2.09
---Mobile Sources ³	760.9	104.5	241.2	5.6	8.2

Sources: 1. Federal Register (629123) June 26, 1997; 2. Air Force 2001d; 3. Air Force 2002

The Clean Air Amendments (CAA) Section 176(c), General Conformity, establishes certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state's State Implementation Plan (SIP) for attainment of national ambient air quality standards (NAAQS). In 1993, USEPA issued the final rules for determining air quality conformity. Federal activities must not (1) cause or contribute to any new violation; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS. General conformity applies only to non-attainment and maintenance areas. If the emissions from a federal action proposed in a non-attainment area exceed annual emission thresholds identified in the rule (*de minimis* levels) or are regionally significant (identified as equal to, or more than, 10 percent of the emissions inventory for the region), a conformity determination is required of that action. The thresholds become more restrictive as the severity of the non-attainment status of the region increases. For the newly adopted 8-hour O₃ and the PM_{2.5} standards, according to USEPA Guidance (March 2000), conformity and other planning requirements would be triggered on the effective date of the final USEPA designations.

No stationary emission sources are currently in use at Buildings 868, 869, 948 and 949. Buildings 869 and 949 each included one 1,000-gallon diesel fuel tank (8.8 feet long and 4.4 feet in diameter), which were identified as inactive during calendar year 1998 in the 1999 *Air Emissions Inventory for Langley AFB* (Air Force, 2001d).

4.0 ENVIRONMENTAL CONSEQUENCES

Chapter 4.0 presents the environmental consequences of the Proposed Action and alternative at Langley AFB for each of the resource areas discussed in Chapter 3.0. To define the consequences, this chapter evaluates the project elements described in Chapter 2.0 against the affected environment provided in Chapter 3.0. Cumulative effects of the Proposed Action with other foreseeable future actions are presented in Chapter 5.0.

4.1 LAND USE

4.1.1 Proposed Action

Land Use. The Proposed Action is consistent with surrounding land uses and would be in accordance with the Enforceable Regulatory Programs of the Virginia Coastal Resources Management Program. This project would not have any component that would affect any of the following sections of the Enforceable Regulatory Program: Fisheries Management, Subaqueous Lands Management, Dunes Management, Point Source Pollution Control, Shoreline Sanitation, and Coastal Lands Management. Not all of these enforceable programs are applicable to the Proposed Action, as explained in the following sub-sections.

Fisheries Management. The implementation of this project would have no adverse effect on the conservation and enhancement of finfish and shellfish resources, or on the promotion of commercial and recreational fisheries.

Subaqueous Lands Management. The implementation of this project would not involve encroachment into, on, or over, state-owned sub aqueous lands.

Dunes Management. There are no sand-covered beaches or sand dunes in the vicinity of this project.

Shoreline Sanitation. This project would include interconnections to the base sanitary sewer system. No septic systems, regulated by this program, would be proposed.

Wetlands Management. This project would have no adverse effect on any identified wetlands present on Langley AFB.

Coastal Lands Management. This project would not be located within 100 feet of the Resource Management Areas (RMAs) or Resource Protection Areas (RPAs) as designated by the Chesapeake Bay Preservation Act.

Transportation. The Proposed Action would not affect long term vehicular circulation in the area. New facilities are not proposed for the site, and traffic levels would remain as they are today. Truck traffic associated with the demolition would be directed through the LaSalle Gate and it is possible that this truck traffic may lead to some degradation of these road surfaces and

occasional congestion at the LaSalle Gate. These adverse effects would be short-term and not significant.

Visual Resources. Impacts to visual resources could occur as a result of the Proposed Action. The four houses are located in a residential area associated with the Langley Field Historic District and their removal would change the visual fabric of the area. Shrubs around the houses would be removed, but trees on and near the properties would remain in place. The building footprints would be landscaped in grass following demolition, resulting in two open landscaped areas within the residential districts.

4.1.2 Alternative 1 – Building Relocation

LAND USE

Effects to land use are not expected under this alternative. On base land use would be in conformance with existing plans and programs. Future construction on the vacated sites, if any, would be likely to be residential (Personal communication, Baie 2004). Relocation to an off base location would require review and approval from the local zoning or planning board to ensure compliance with the regulations of the municipality.

Transportation. Alternative 1 is not expected to affect long term vehicular circulation in the area. New facilities are not proposed for the site and traffic levels would remain as they are today. Truck traffic associated with building relocation would be directed along Clarke Avenue and through the LaSalle Gate. Temporary, insignificant impacts to transportation could occur during the process of moving the structures through the base, disrupting traffic flow along the route of the move.

Visual Resources. Effects to visual resources under Alternative 1 would be similar to those identified for the Proposed Action. Relocation of the houses to an off base location would have the potential to affect the visual resources of the new location. It is assumed that the houses would be rehabilitated at the new location in accordance with local building codes and no significant adverse effects would be anticipated.

4.1.3 Alternative 2 – Building Rehabilitation

Land Use. Effects to land use are not expected under this alternative. If the buildings were rehabilitated for continued use as housing units, then land use would remain as it is today and would be in conformance with existing plans and programs. If the buildings are rehabilitated for administrative or other office use, this would also be done in keeping with existing plans and programs.

Transportation. Alternative 2 is not expected to affect long-term transportation in the area. Temporary insignificant impacts from truck traffic associated with building rehabilitation could occur. It is possible that truck traffic associated with rehabilitation could lead to limited

degradation of road surfaces and occasional congestion. These adverse effects would be short-term and not significant. Use of the buildings as commercial or office space could introduce additional local traffic and occasional congestion. This effect would be localized and the proximity of the buildings to Clarke Avenue would reduce the impact on nearby residences to insignificance.

Visual Resources. Beneficial effects to visual resources could occur under this alternative. The houses would be rehabilitated for adaptive reuse and the exteriors would be upgraded in a manner that would be visually consistent with the surrounding Langley Field Historic District.

4.1.4 No Action Alternative

Impacts to land use, transportation, and visual resources are not anticipated under this alternative. Demolition activities would not occur, and resource management would continue under existing Langley AFB programs. No environmental consequences to this resource would be expected.

4.2 CULTURAL RESOURCES

A number of federal regulations and guidelines have been established for the management of cultural resources. Section 110 of the NHPA sets out the broad historic preservation responsibilities of federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all federal agencies. Section 106 of the NHPA, as amended, requires federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are cultural resources that are listed in, or eligible for listing in, the NRHP. Eligibility evaluation is the process by which resources are assessed relative to NRHP significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Under federal law, impacts to cultural resources may be considered adverse if the resources have been determined eligible for listing in the NRHP or have significance for Native American groups.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts are assessed by identifying the types and locations of proposed activity and determining the exact location of cultural resources that could be affected. Indirect impacts result primarily from the effects of project-induced population increases.

4.2.1 Proposed Action

Adverse impacts to historic architectural resources are expected under the Proposed Action. Demolition of the four houses (Buildings 868, 859, 948, and 949), contributing members of the

Langley Field Historic District, would constitute an adverse impact to four historic properties that constitute one third of the remaining base facilities dating to the 1920s. Langley AFB initiated consultation with the Virginia Department of Historic Resources (DHR) in January 2004 regarding the Proposed Action (refer to Appendix A). The DHR agreed that the action would constitute an adverse impact, suggested that demolition may not be a mission-critical need, recommended consideration of alternatives to the Proposed Action that would avoid or minimize the adverse effect, and requested that the Air Force notify the Advisory Council on Historic Preservation (ACHP) to determine ACHP participation in the process. The Air Force notified the ACHP of the Proposed Action, and the ACHP declined to participate in the consultation (personal communication, Baie 2004). DHR also asked the Air Force to study the possibility of rehabilitating the houses for reuse. At that time, the houses were thought to be designed by noted architect Albert Kahn.

In response to the DHR request, Langley AFB commissioned a study of alternative treatments for the proposed demolition (Peyton and Freeman 2004). The study provided a detailed historic context for the houses, as well as exploring alternatives to demolition such as rehabilitation, and relocation. The study also found that the four houses are not directly attributable to Albert Kahn, but were complementary standardized designs tailored for construction at Langley Field by the Office of the Quartermaster General (OQMG). The study recommended that if the facilities were demolished, mitigation in the form of modified Historic American Buildings Survey (HABS) recordation, comparable to HABS Level II standards, would be appropriate prior to demolition (Peyton and Freeman 2004).

As a result of this study and consultation between the Air Force and the Virginia DHR, a programmatic agreement (signed by both parties in November and December 2004; see Appendix B) stipulates a treatment plan to be instituted if Langley AFB determines that rehabilitation or relocation of Buildings 868, 869, 948 and 949 cannot be completed in an economically feasible manner that meets Air Force mission requirements. Under the Proposed Action, Langley Air Force Base would implement measures to address adverse impacts, as described in sections I.B.4, I.C and II of the programmatic agreement (see Appendix B). For the four houses, these measures include

- detailed photographic and architectural recordation of the houses;
- completion of detailed SHPO recording forms including building descriptions and statements of significance within the context of the draft National Register Nomination for the Historic District;
- SHPO review of draft records;
- filing of the records at the SHPO, the Office of the Command Historian, HQ ACC, and the City of Hampton Public Library [stipulation II.A);

Furthermore, the programmatic agreement stipulates that the Air Force would seek funds to rehabilitate Facility 700, the old base fire station and a contributing building to the historic district (stipulation II.B.1 and II.B.2), feature historic structures in its annual Historic

Preservation Week (stipulation II.B.3), and ensure that new construction is consistent with the Langley AFB architectural standards for construction within the Langley Field Historic District (stipulation II.B.4).

Impacts to archaeological resources are not expected under the Proposed Action. The four houses are located in a disturbed area with low archaeological potential (Wheaton et al. 1991). However, the programmatic agreement between the Air Force and the Virginia DHR stipulates that in the event of unanticipated discoveries of archaeological resources, work would halt in the area, and the resources would be managed in compliance with Section 106 of the NHPA and Air Force regulation, including consultation with the Virginia DHR (refer to Appendix B, stipulation III). Impacts to traditional resources are not expected under the Proposed Action. There are no federally-recognized Indian lands or resources at Langley AFB, and no issues have been identified by federally-recognized or other Indian groups in Virginia. The Air Force has contacted the Virginia Council of Indians, the Hampton History Museum, and the Hampton Historical Society about the Proposed Action.

4.2.2 Alternative 1 – Building Relocation

Adverse impacts to historic architectural resources could occur under this alternative. Relocating the houses would adversely affect the historic context of the houses and could adversely affect their NRHP eligibility. The four houses are some of the few remaining structures from the LTA-era remaining in the historic LTA area of the base. Other houses from that era were completed near the end of or after the period of significance for the LTA mission and display an architectural style uncharacteristic of the original LTA layout (Peyton and Freeman 2004). Building relocation would be conducted in consultation with the DHR as outlined in the programmatic agreement (Appendix B, stipulation I.B.3). Under this alternative measures to address impacts include ensuring the long-term preservation of the historic characteristics of the houses, seeking funds to rehabilitate Facility 700, the old base fire station and a contributing building to the historic district (stipulation II.B.1 and II.B.2), featuring historic structures in its annual Historic Preservation Week (stipulation II.B.3), and ensuring that new construction is consistent with the Langley AFB architectural standards for construction within the Langley Field Historic District (stipulation II.B.4). Similar to the Proposed Action, impacts to archaeological or traditional resources would not be expected under this alternative.

4.2.3 Alternative 2 – Building Rehabilitation

Beneficial effects to Buildings 868, 859, 948, and 949 could occur under this alternative. Although Waller Todd & Sadler's (2002) condition assessment found that the houses had "reached the end of their useful lives," a subsequent study found that although the houses are in some disrepair, they are structurally sound, marginally modified from their original design, and retain many of their original character-defining features (Peyton and Freeman 2004). The four houses would be rehabilitated for use as housing units, or for another function, such as administrative offices, in compliance with Section 110 of the NHPA, which directs Federal

agencies to use historic properties under their control “to the maximum extent feasible.” If rehabilitated to serve as housing, an addition would be constructed at the rear of each building to meet Air Force housing requirements (Peyton and Freeman 2004). All rehabilitation would be conducted in consultation with the DHR, and in keeping with the *Secretary of the Interior’s Standards for Rehabilitation* (36 CFR Part 67), and the architectural standards of the Langley Field Historic District. These conditions are outlined in the programmatic agreement between Langley AFB and the Virginia DHR (refer to Appendix B) under stipulation I.B.1 and I.B.2. As with the Proposed Action, no impacts to archaeological or traditional resources are expected under this alternative.

4.2.4 No Action Alternative

Under the No Action alternative, demolition, relocation or rehabilitation of the four houses would not occur. Adverse impacts to historic properties could occur if the houses are allowed to deteriorate. Zero-maintenance procedures and disconnection of utilities in vacant buildings can result in deterioration of the buildings. Under Section 106 of the NHPA, “neglect of a property resulting in its deterioration or destruction,” is identified as an adverse effect (Section 800.9 [b]). However, Langley AFB’s Preservation and Maintenance Plan would preclude adverse effects from neglect (Air Force 2004b). Preventive maintenance, or proper mothballing as described in the National Park Service’s *Preservation Brief 13: Mothballing Historic Buildings* (National Park Service 1993) would protect the buildings from the dangers of neglect. No impacts to archaeological or traditional resources would be expected. Resources would continue to be managed in compliance with Federal law and Air Force regulation.

4.3 WATER RESOURCES

4.3.1 Proposed Action

Demolition of the four houses would take place within the 100-year floodplain, and could potentially result in minor soil erosion and increases in turbidity from soil erosion. To reduce this outcome, prior to the start of demolition, silt fences, storm drain inlet and outlet protection, and other appropriate standard Best Management Practices (BMP) would be instituted, in accordance with Department of Conservation and Recreation’s (DCR’s) *Virginia Erosion and Sediment Control Handbook*, to address soil erosion. Since less than one acre would be disturbed by demolition, a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit would not be required. There would be no impacts to water resources from point source or non-point sources, and the Proposed Action would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program.

4.3.2 Alternative 1- Building Relocation

Under Alternative 1, the four houses would not be demolished, but would be relocated to an undetermined location off base. Potential impacts to water resources under this alternative

would depend upon the site selected for relocation. The contractor would institute BMP construction practices to control potential erosion and water quality issues at the new site.

4.3.3 Alternative 2 – Building Rehabilitation

Under Alternative 2, the four houses would not be demolished, but would be rehabilitated on site for reuse. Renovation of the four houses would take place within the 100-year floodplain. Prior to the start of construction, silt fences, storm drain inlet and outlet protection, and other standard BMP construction practices would be instituted as appropriate. Since less than one acre would be disturbed by construction, a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit would not be required. There would be no impacts to water resources from point source or non-point sources under this alternative, and it would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program.

4.3.4 No Action Alternative

Under the No Action alternative, neither demolition, relocation nor rehabilitation would occur. Adverse effects to the four historic properties through neglect would be avoided by adherence to the Preservation and Maintenance Plan outlined in the Langley AFB ICRMP (Air Force 2004b). Management of water resources would continue under existing Langley AFB programs and there would be no environmental consequences to this resource.

4.4 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

4.4.1 Proposed Action

HAZARDOUS MATERIALS

Demolition of the four houses is not expected to require the use of hazardous materials by contractor personnel. Any demolition debris generated by the proposed project would be handled, stored and disposed of in accordance with federal, state, and local regulations and laws.

HAZARDOUS WASTE

Contractor personnel are not expected to generate hazardous waste during demolition, with the exception of lead paint and asbestos. Any soil suspected of contamination, as discovered during the demolition process, would be tested and disposed of in accordance with proper regulations.

In the event of fuel spillage during demolition, the contractor will be responsible for its containment, cleanup and related disposal costs. The contractor will have sufficient spill supplies readily available on the pumping vehicle and/or at the site to contain any spillage. In

the event of a contractor related release, the contractor will immediately notify the 1 FW Civil Engineering/Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

Asbestos Waste/Lead-Based Paint

Removal and disposal of asbestos-containing materials (ACM) or lead-based paint found in or near the demolition areas would follow Federal and State regulations. Special Conditions, Section 01110, Paragraphs 3 and 5, require the contractor to submit all required permits, certificates, notifications and manifests to the Contracting Office for approval.

- *Asbestos Removal and Disposal.* Upon classification as friable or non-friable, all waste ACM will be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*).
- *Lead-Based Paint Removal and Disposal.* The proposed project will comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations (9 VAC 20-60-261).

STORAGE TANKS

No known active or inactive storage tanks are located within the area immediately surrounding the four houses. As identified in Chapter 3, all storage tanks were previously removed. Underground piping from the previously located tanks to the houses was never removed, and would be removed during demolition of the four houses. Any contaminated soils encountered during pipe excavation must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. These include but are not limited to the Virginia Waste Management Act, Code of Virginia section 10.1-1400 *et seq.*, Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (9VAC 20-80); and Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110).

ENVIRONMENTAL RESTORATION PROGRAM

The Proposed Action would not occur near any ERP Sites. However, any soil suspected of contamination, as discovered during the demolition process, would be tested and disposed of in accordance with proper VDEQ regulations. Disposal of contaminated soil would be funded by this demolition project.

SOLID WASTE MANAGEMENT

The Proposed Action would generate solid wastes consisting of concrete, brick, wood, structural steel, glass, and miscellaneous metal building components (Table 4.4-1).

**Table 4.4-1. Cubic Yards of Solid Waste
Expected from Demolition**

<i>Building #</i>	<i>Cubic Yards of Solid Waste</i>
868	673
869	673
948	956
949	966
Total Cubic Yards	3,268

The total amount of demolition waste generated is estimated to be approximately 3,268 cubic yards. Demolition contractors would be directed to recycle materials to the maximum extent possible, thereby reducing the amount of demolition debris disposed in landfills. Materials not suitable for recycling would be taken to a landfill permitted to handle construction debris wastes, such as the Bethel Landfill in Hampton. That landfill has capacity to operate for 49 years (VDEQ 2004) and the waste generated by the Proposed Action would not have a significant impact to the operating life of the landfill. No significant environmental effects would result from the implementation of the Proposed Action.

4.4.2 Alternative 1 – Building Relocation

HAZARDOUS MATERIALS

Under Alternative 1, the houses would be relocated to an undetermined location on or off base. Relocation of the houses is not expected to require the use of hazardous materials by contractor personnel.

HAZARDOUS WASTE

Contractor personnel are not expected to generate hazardous waste during house relocations. In the event of fuel spillage during relocation, either on or off the Base, the contractor will be responsible for its containment, cleanup and related disposal costs. In the event of a contractor related release, the contractor will immediately notify the 1 FW Civil Engineering/ Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

Asbestos Waste/Lead-Based Paint

House relocations are not expected to affect asbestos waste or lead-based paint as no demolition to the structures would occur.

STORAGE TANKS

As identified in Chapter 3, all storage tanks were previously removed. Underground piping from the previously located tanks to the houses was never removed, and would be removed during relocation of the four houses. Any contaminated soils encountered during pipe excavation must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. These include but are not limited to the Virginia Waste Management Act, Code of Virginia section 10.1-1400 *et seq.*, Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (9VAC 20-80); and Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110).

ENVIRONMENTAL RESTORATION PROGRAM

The relocation of the houses would not occur near any ERP Sites. However, any soil suspected of contamination, as discovered during the relocations process, would be tested and disposed of in accordance with proper VDEQ regulations. Disposal of contaminated soil would be funded by this relocation project.

SOLID WASTE MANAGEMENT

The relocation of the houses would not affect or generate solid waste. No significant environmental effects would result from the implementation of this alternative.

4.4.3 Alternative 2 – Building Rehabilitation

HAZARDOUS MATERIALS

Renovation of the four houses is not expected to require the use of hazardous materials by contractor personnel. Any construction debris generated by this alternative would be handled, stored and disposed of in accordance with federal, state, and local regulations and laws.

HAZARDOUS WASTE

Contractor personnel are not expected to generate hazardous waste during renovations. Any soil suspected of contamination, as discovered during the renovations process, would be tested and disposed of in accordance with proper regulations.

In the event of fuel spillage during renovations, the contractor would be responsible for its containment, cleanup and related disposal costs. The contractor would have sufficient spill supplies readily available on the pumping vehicle and/or at the site to contain any spillage. In the event of a contractor related release, the contractor shall immediately notify the 1 FW Civil Engineering/Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

Asbestos Waste/Lead-Based Paint

Removal and disposal of asbestos-containing materials (ACM) or lead-based paint found in or near the renovation areas would follow Federal and State regulations. Special Conditions, Section 01110, Paragraphs 3 and 5, require the contractor to submit all required permits, certificates, notifications and manifests to the Contracting Office for approval.

- *Asbestos Removal and Disposal.* Upon classification as friable or non-friable, all waste ACM should be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*).
- *Lead-Based Paint Removal and Disposal.* The proposed project should comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations (9 VAC 20-60-261).

STORAGE TANKS

As identified in Chapter 3, all storage tanks were previously removed. Underground piping from the previously located tanks to the houses was never removed, and would be removed during renovation of the four houses. Any contaminated soils encountered during renovation must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. These include but are not limited to the Virginia Waste Management Act, Code of Virginia section 10.1-1400 *et seq.*, Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (9VAC 20-80); and Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110).

ENVIRONMENTAL RESTORATION PROGRAM

The Proposed Action would not occur near any ERP Sites. However, any soil suspected of contamination, as discovered during renovation, would be tested and disposed of in accordance with proper VDEQ regulations. Disposal of contaminated soil would be funded by this renovation project.

SOLID WASTE MANAGEMENT

Alternative 2 would generate solid wastes consisting of concrete, brick, wood, structural steel, glass, and miscellaneous metal building components. The total amount of renovation waste generated is uncertain because the extent of renovations has not yet been determined. Renovation contractors would be directed to recycle materials to the maximum extent possible, thereby reducing the amount of debris disposed in landfills. Materials not suitable for recycling would be taken to a landfill permitted to handle construction debris wastes, such as the Bethel Landfill in Hampton. That landfill has capacity to operate for 49 years (Commonwealth of

VDEQ 2004) and the waste generated by Alternative 2 would not have a significant impact to the operating life of the landfill. No significant environmental effects would result from the implementation of Alternative 2.

4.4.4 No Action Alternative

Under the No Action alternative, there would be no demolition, relocation or rehabilitation. Management of hazardous wastes would continue under existing Langley AFB programs and Adverse effects to the four historic buildings through neglect would be avoided by adherence to the Preservation and Maintenance Plan outlined in the Langley AFB ICRMP (Air Force 2004b). there would be no environmental consequences to this resource.

4.5 NOISE

Noise impact analyses typically evaluate potential changes to existing noise environments that would result from implementation of a proposal. Potential changes in the noise environment can be (1) beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels); (2) negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged); or (3) adverse (i.e., if they result in increased exposure to unacceptable levels).

4.5.1 Proposed Action

Implementation of the Proposed Action would have minor, temporary increases in localized noise levels in the vicinity of the project area during building demolition. Although the base is an active military facility that typically experiences high noise levels from daily flight operations, the Proposed Action would take place within a residential part of the base, and local housing units may be sensitive to demolition noise. Use of heavy equipment for demolition, grading, and fill would generate noise that would be similar to typical construction noise. It would last only the duration of the specific demolition activities, and could be reduced by the use of equipment sound mufflers and restricting construction activity to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Compared with aircraft noise, noise produced by demolition would be relatively lower in magnitude, and spread out during the business day. Noise from truck traffic hauling materials from the site would not affect base residents as the number of trucks, duration and intensity of the additional traffic would be low. The noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant.

4.5.2 Alternative 1 – Building Relocation

Under Alternative 1, the four houses would not be demolished, but would be relocated to an undetermined location off base. Limited temporary increases in localized noise levels in the vicinity of the houses could occur during preparation for relocation and actual relocation. Noise

levels would temporarily increase and would be limited to daytime hours. Therefore, impacts are considered insignificant.

4.5.3 Alternative 2 – Building Rehabilitation

Under Alternative 2, the four houses would not be demolished, but would be rehabilitated on site for reuse. Limited temporary increases in localized noise levels in the vicinity of the houses could occur during renovation, comparable to the noise of ongoing nearby whole-house renovations. Noise would be similar to typical construction noise, last only the duration of the specific renovation activity, and would be restricted to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Noise from truck traffic hauling renovation materials to and from the site would occur, but would be similar to comparable noise associated with nearby whole house renovations. The noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant.

4.5.4 No Action Alternative

Under the No Action alternative, noise levels would remain the same as they are currently.

4.6 AIR QUALITY

The air quality analysis included an assessment of direct and indirect emissions from the known activities associated with the Proposed Action, the two action alternatives, and the No Action alternative at Langley AFB that would affect the regional air quality. The activities identified as requiring evaluation included demolition of the houses; vehicle travel to and from the Base for demolition; vehicle travel to and from the Base for transport of debris from demolition; and/or vehicle travel to and from the base for renovation activities. Emissions from the Proposed Action, alternatives, and the No Action alternative are either “presumed to conform” (based on emissions levels that are considered insignificant in the context of overall regional emissions) or they must demonstrate conformity with approved SIP provisions.

4.6.1 Proposed Action

Emissions during the project period were quantified to determine the potential impacts on regional air quality. These emissions were compared to federal conformity *de minimis* thresholds for O₃ precursors (volatile organic compounds [VOC] and NO_x). Emissions of VOC, NO_x, CO, and PM₁₀ from construction activities were calculated using emission factors from the *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (Air Force 2002) which is a compilation of USEPA emission factors. The emission factors included contributions from engine exhaust emissions (i.e., on-site equipment and material hauling) and fugitive dust emissions (e.g., from demolition activities). It was assumed that a total of 216 trips would be required to haul the demolition debris in a truck with a capacity of 15 cubic yards to a landfill located 30 miles away. The emissions, in tons per construction period, from the Proposed Action are presented in Table 4.6-1.

Table 4.6-1. Project Emissions – Proposed Action and Alternatives

<i>Criteria Pollutants</i>	<i>Langley AFB Baseline Emissions (tons per year)</i>	<i>Hampton Roads AQCR (tons per year)</i>	<i>Temporary Emissions (tons)</i>		
			PROPOSED ACTION	ALTERNATIVE 1	ALTERNATIVE 2
CO	768.09	257,325	0.1	< 0.1	< 0.1
VOCs	115.18	79,750	< 0.1	< 0.1	< 0.1
NO _x	283.38	83,560	0.1	< 0.1	< 0.1
SO ₂	6.47	110,220	< 0.1	< 0.1	< 0.1
PM ₁₀	10.29	49,860	< 0.1	< 0.1	< 0.1

Total project emissions generated on base and within the Hampton Roads AQCR are less than 1 percent when compared to regional emissions and are below the 100 tons per year *de minimis* federal conformity thresholds for NO_x and VOCs. Emissions generated by construction and demolition projects are temporary in nature and would end when demolition is complete. The emissions from fugitive dust (PM₁₀) would be significantly less due to the implementation of control measures in accordance with standard demolition practices. For instance, frequent spraying of water on exposed soil during demolition, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during development. The base employs street sweepers to reduce the amount of dirt and debris on the roadways within the base. Using efficient grading practices and avoiding long periods where engines are running at idle could reduce combustion emissions from construction and demolition equipment. Vehicular combustion emissions from project workers commuting may be reduced by carpooling.

No direct operational emissions are expected to occur after the proposed project is completed, as the facilities would no longer exist. No new stationary sources or additional personnel would be added to the base, and no active stationary sources would be removed, as a result of the proposed project. No changes to the Synthetic Minor Operating permit issued by VDEQ are anticipated.

General conformity regulations set forth in 40 CFR 51 Subpart W, and adopted in the Virginia Administrative Code (9 VAC 5 Chapter 160), outline *de minimis* levels of emissions, below which it is presumed that the action conforms to the SIP. The *de minimis* levels for O₃ precursors in a maintenance area outside of an O₃ transport region (i.e., Hampton Roads AQCR) are 100 tons per year of VOC emissions and 100 tons per year of NO_x. In addition, the Proposed Action's emissions (both direct and indirect) must be compared to the regional inventory to determine if the emissions are "regionally significant." Emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold thus demonstrating compliance with CAA conformity requirements. In addition, the Proposed Action alternative's emissions, as shown in Table 4.6-1 compared to baseline conditions, are well below the regional significance threshold

defined by 10 percent of the regional emissions (i.e., 8,365 tons per year of NO_x and 7,975 tons per year of VOC).

4.6.2 Alternative 1 – Building Relocation

Under Alternative 1, the four houses would not be demolished, but would be relocated to an undetermined location off base. Without demolition activity, fugitive dust emissions would be negligible compared to those under the Proposed Action. Hauling emissions would also be less than those under the Proposed Action because of the reduced number of trips required to haul whole, or almost whole, houses instead of demolition debris. Project emissions for each criteria pollutant would be less than 0.1 tons per year (Table 4.6-1).

4.6.3 Alternative 2 – Building Rehabilitation

Under Alternative 2, the four houses would not be demolished, but would be renovated. It is expected that the renovations would require limited contractor traffic to and from Langley AFB, and removal of small amounts of debris from the renovation activities. Project emissions for each criteria pollutant are expected to be less than 0.1 tons per year. Under Alternative 2, the renovated houses would be equipped with new natural gas-fired water heaters and boilers. While it is expected that operational emissions from these boilers would result in emissions of less than 0.1 tons per year for each criteria pollutant (Table 4.6-1), the new natural gas-fired external combustion equipment would need to be included in the Synthetic Minor operating permit.

4.6.4 No Action Alternative

Under the No Action alternative, demolition, relocation, or renovation of the four houses would not occur. Air quality would remain the same as present conditions (refer to the Baseline column in Table 4.6-1).

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5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

5.1.1 Definition of Cumulative Effects

CEQ regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the Proposed Action. The scope must consider geographic and temporal overlaps among the Proposed Action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the Proposed Action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, this EA addresses three questions:

1. Does a relationship exist such that elements of the Proposed Action might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the Proposed Action and another action could be expected to interact, would the Proposed Action affect or be affected by impacts of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the Proposed Action is considered alone?

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and

the actions have a potential to interact with the Proposed Action in this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the Proposed Action.

5.1.2 Past, Present, and Reasonably Foreseeable Actions

This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the Proposed Action, but also the incremental contribution of past, present, and reasonably foreseeable actions.

PAST AND PRESENT ACTIONS RELEVANT TO THE PROPOSED ACTION AND ALTERNATIVES

Langley AFB is an active military installation that undergoes continuous change in mission and in training requirements. This process of change is consistent with the U.S. defense policy that the Air Force must be ready to respond to threats to American interests throughout the world. In 1998, the Air Force implemented a force structure change that added 12 F-15C aircraft and 134 personnel to Langley AFB, increasing the total number of F-15C aircraft to 66. In 2001 Langley AFB was chosen as the beddown location of the Initial Operational Wing for 72 of the new F/A-22 aircraft. To support this beddown various projects including demolition and construction of three hangers, construction of a new simulator building and other support buildings have been implemented or are under development. Approximately 16 acres of the base along the flightline are under development to support the beddown.

The base, like any other major institution, also requires occasional new construction, facility improvements, and infrastructure upgrades. These improvements include demolition of the Steam Plant (building 80) in 2004. The base has been in operation since 1917 and many facilities have outlived their useful life and require extensive renovation or demolition. Demolition within the historic district in 2004 included the water tower (building 616). Langley AFB is currently upgrading portions of its water, storm water drainage system and electrical system and renovating the old Shopette (building 442). Also under construction is a new operations support center, and a new outdoor running track. Construction is now complete on the new housing management office, dormitory complex, and reconstruction of the King Street Gate.

INCREMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES WITH REASONABLY FORESEEABLE FUTURE ACTIONS

During the FY 05 to FY 08 timeframe, Langley AFB has proposed a number of actions that are independent of the Proposed Action and would be implemented irrespective of a decision on the demolition of these four facilities (868, 869, 948, 949). In order to redevelop portions of the base and to eliminate facilities that are obsolete, the base is considering demolition of various buildings within the historic district. These include the LTA single-family housing units (868, 869, 948, 949) discussed in this EA, the Greenhouse (1001), Dock (610), and miscellaneous

buildings 615, 731, 732, 735. Outside the historic district the AAFES gas station (258), Class VI store (272) and buildings 80 and 1033 are also being considered for demolition.

Planned community support construction includes a new youth center, expansion of the hospital and construction of a new AAFES mini-mall, redevelopment of the marina, reconstruction of the LaSalle and West gates, including widening of a portion of Sweeney Boulevard. The base is also planning a series of infrastructure improvements that include an expansion to the alert area, construction of a new visitors quarters, replacement of the existing 2 MGD potable water storage tank, relocation of the government gas station, construction of a Combined Arms Training Range, demolition of the Dock (building 610), relocation of the Explosive Ordnance Disposal (EOD) training range, expansion of the Distributed Common Ground System (DCGS) facilities, and construction of a Combined Arms Training Range.

5.1.3 Analysis of Cumulative Impacts

The following analysis examines how the impacts of these other actions might be affected by those resulting from the Proposed Action and alternatives at Langley AFB and whether such a relationship would result in potentially significant impacts not identified when the Proposed Action is considered alone.

This demolition is part of a potential cumulative effect within the Historic District. Construction at Langley AFB for the beddown of the F/A-22 mission would impact the architectural and visual aspects of the Langley Historic District with the demolition of three aircraft hangers. The beddown of the Initial Operational Wing of F/A-22 aircraft has been analyzed in an Environmental Impact Statement (Air Force 2001b).

Langley AFB has prepared an EA for the proposed demolition of Building 633, the former Seaplane Hangar. This building, a contributing member of the Langley Field Historic District, is located in an area of historic buildings associated with the development of the National Advisory Committee for Aeronautics' (NACA) flight programs, and the development of the installation during the 1930s. The building was used as a Quartermaster Corps warehouse by 1934, and later as a Corps of Engineers maintenance facility (Hayes et al. 2004). It was remodeled in 1952 when it is believed that the roofing material was removed, the hangar openings in-filled, and the glazed opening covered over (HSMM 2004). The proposed demolition of these houses would be addressed through actions stipulated in a Programmatic Agreement (PA) between Langley AFB and the SHPO.

In another EA for a proposed demolition of five facilities, Langley AFB has consulted with the Virginia DHR (SHPO) regarding demolition of the Greenhouse (Building #1001), a contributing member of the Langley Field Historic District, and four other facilities also located within the historic district landscape (USACE 2004). The Greenhouse was severely damaged during Hurricane Isabel. Although the physical structure would be removed, the history of the structure would be preserved through recordation.

NASA's Langley Research Center (LaRC), with facilities at Langley AFB, is currently preparing an EA for the proposed demolition of two of their National Historic Landmarks (NHLs) that lie within the Langley Field Historic District: the 8 Foot High Speed Tunnel (Building 641), and the Full Scale Tunnel (Building 643). Demolition is also proposed for the 8 Foot Transonic Tunnel (Building 640), which is eligible for the NRHP as a contributing member of the Historic District. The 8 Foot High Speed Tunnel was a landmark in wind tunnel design when it was completed in 1936. It was deactivated in 1956, when a new 8-foot pressure tunnel was built near it. The Full Scale Tunnel was the world's first full-scale wind tunnel, completed in 1931. The tunnel is housed in a large building that comprises a major visual component of the Langley Field Historic District. The 8 Foot Transonic Tunnel was constructed in 1953 on the site of the Propeller Research Tunnel (1927), which was demolished in 1950.

Future infrastructure actions (analyzed in separate environmental documents) would not be expected to result in more than negligible impacts either individually or cumulatively, with the exception of historic properties demolitions associated with the above-described actions. The recent past and potential future demolitions of historic buildings at Langley AFB, when considered in combination with the Proposed Action, could result in adverse cumulative effects to the historic properties of the Langley Field Historic District. Relocation of the buildings as proposed under Alternative 1, while preserving the buildings themselves, would still add to the loss of historic properties within the Langley Field Historic District. Alternative 2, renovation of the buildings and possible commercial or other use, would not contribute to impacts to the historic district.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of "... any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the demolition of a historic building).

For the Proposed Action, most resource commitments are neither irreversible nor irretrievable. Most environmental consequences are short term and temporary (such as air emissions from construction) or longer lasting but negligible (e.g., utility increases). Those resources that may involve a possible irreversible or irretrievable commitment under the Proposed Action are discussed below.

Demolition of the four historic houses under the Proposed Action would remove one-third of the remaining facilities from the 1920s era. They are also the oldest residential units remaining in the LTA (north base) area, as all other residential units from this era are in the HTA (south base) area. Although demolition of historic buildings is an irretrievable commitment of resources, measures to address the loss of value of the structures would be accomplished through implementation of the programmatic agreement signed by Langley AFB and the Virginia DHR, including extensive recording of the historic character of the houses.

Alternative 1, relocation and reuse of the four historic houses, would require limited consumption of fuel and building materials typically associated with transportation, settling the houses on new foundation sand rehabilitating them for continued use. Available resources used in these efforts would not be significantly decreased through these actions.

Under Alternative 2, renovation of the four houses would require consumption of limited amounts of materials typically associated with demolition, interior and exterior construction (e.g., concrete, wiring, insulation, and windows). The amount of these materials used is not expected to significantly decrease the availability of the resources.

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APPENDIX A

CONSULTATION LETTERS

FAX TRANSMITTAL

of pages ▶



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27 January 2004

Bruce W. MacDonald, GM-14
Deputy Base Civil Engineer
37 Sweeney Blvd.
Langley AFB VA 23665

Re: Facilities 868, 869, 948, and 949 – Single Family Housing Units, Lighter-Than-Air Area
Langley Air Force Base
Hampton, VA
DHR project no. 2003-1241

Dear Mr. MacDonald,

Thank you for requesting comments from the Virginia Department of Historic Resources (DHR) concerning the proposed demolition of facilities 868, 869, 948, and 949, single family housing units, located in the Lighter-Than-Air (LTA) Area of the Langley Air Force Base. As your letter notes, these contribute to the Langley Field Historic District's eligibility for listing in the National Register of Historic Places. Further, as explained in your letter, the houses are part of the early permanent development of Langley Air Force Base, and are among the few remaining military family housing buildings from that period. Also, the four housing units were designed by Albert Kahn, an important American architect of the first half of the twentieth century, who, as your letter points out, also designed many of Langley's early buildings and the original base plan.

DHR agrees that demolition of facilities 868, 869, 948, and 949 will result in an adverse effect on the Langley Field Historic District. DHR recommends consideration of alternatives to the proposed undertaking that will avoid or minimize the adverse effect, in addition to those that have been addressed, along with further exploration of rehabilitation of the buildings for continuing use. As stated in the summary of the revised Section 106 regulations, prepared by the Advisory Council on Historic Preservation, "A finding of adverse effect requires further consultation on ways to resolve it." Please see 36 CFR Part 800.5(d)(2) and 800.6 of the Section 106 regulations, part of the National Historic Preservation Act of 1966, for direction on this process. Note that Section 800.5(d)(2) states that "If an adverse effect is found, the [Federal] Agency Official shall consult further to resolve the adverse effect pursuant to Sec. 800.6", and 800.6(a) states that "The [Federal] Agency Official shall consult with the SHPO/THPO and other consulting parties . . . to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties."

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Portsmouth, VA 23704
Tel: (757) 394-8707
Fax: (757) 394-6712

Roanoke Region Office
1030 Pennmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7306

Facilities 868, 869, 948, and 949 – Single Family Housing Units, Lighter-Than-Air Area
 Langley Air Force Base
 Hampton, VA
 DHR project no. 2003-1241

Our specific recommendations for your consideration are as follows. DHR asks that the Air Force study further the possibility of retaining and rehabilitating the four Alfred Kahn designed LTA houses for a suitable use, whether residential, administrative, or for another compatible function. Your letter notes that renovation costs are \$162,972 per unit, and replacement costs are \$132,320. Please clarify whether the replacement costs include the costs associated with all aspects of demolition, and new construction, including removal of building debris from the site, disposal of the debris, architectural design and environmental studies, and site preparation for new construction. If the Air Force finds that the cost of rehabilitating the buildings for continued use far exceeds the cost of demolition of the buildings and construction of replacement buildings, and considers the latter a viable alternative, please provide an itemized cost assessment for these activities.

As you give further consideration to retention and rehabilitation of these buildings, please bear in mind that they are historically very significant, since they were built as part of the early permanent development of Langley Air Force Base, and represent examples of military housing designed by Albert Kahn. The National Park Service has called Langley Air Force Base "the country's most architecturally and historically significant Army airfield because of its unique role in the growth of American military and civil aviation" (letter from Cecil N. McKithan, Chief, National Register Programs Division, to Paul R. Green, Ph.D., 13 December 1995, DHR files). DHR is committed to assisting the Air Force with preservation of the historic and architectural integrity of this national treasure, as the Air Force works to meet its mission needs in the twenty-first century. Over the past few years, DHR has consulted with the Air Force on many projects, including the demolition of historic hangars to make way for new hangars to serve the F-22s, and on the removal of the Mile-Long Building which presented a safety hazard in the airfield's flight path. For these mission critical projects, demolition was recognized as the only feasible alternative. Removal of the four LTA housing units may not be a mission-critical need. DHR asks that the Air Force, through compliance with sections 106 and 110 of the NHPA, continue to work to preserve the integrity of the highly significant Langley Field Historic District, through sound stewardship of historic properties that do not require removal to meet mission demands.

From your letter, it appears that the Air Force's housing policy may encourage demolition of older units, given the constraints of the 50 year and 25 year time frames for the "useful economic life" of "surplus" units, and the directive to demolish such units if another use is not found and strict conditions for temporary retention can not be met. If this is the case, this is in conflict with Section 110 of the NHPA, which directs that Federal agencies should use historic properties under their control "to the maximum extent feasible," "prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities." The housing policy would also be in conflict with the Section 106 regulations and their intent, as it would remove the opportunity to seriously consider alternatives to demolition. Please clarify how the Air Force housing policy and application of the Section 110 and Section 106 regulations can interface in a manner that does not prevent Langley Air Force Base from meeting its obligations under the National Historic Preservation Act.

As the Air Force has proposed that an adverse effect may result from the undertaking, please notify the Advisory Council on Historic Preservation and determine Council participation in the consultation process. Also, please note that it is the responsibility of the Air Force to identify others who may be entitled to

Facilities 868, 869, 948, and 949 -- Single Family Housing Units, Lighter-Th u-Air Area
Langley Air Force Base
Hampton, VA
DHR project no. 2003-1241

become consulting parties, and to provide notification about the undertaking to the public.

Thank you for consulting with DHR concerning this undertaking. If you have questions about DHR's comments, please contact Susan Smead at SSmead@dhr.state.va.us, or by phone at 804-357-2323, extension 110.

Sincerely,



Ethel R. Eaton, Ph.D.
Director, Office of Review and Compliance

c: Don Klima, Advisory Council on Historic Preservation

**The Department of the Air Force Invites Public Comments
On the Draft Environmental Assessment And a Draft Finding of
No Significant Impact/Finding of No Practicable Alternative for
the Demolition of Four Houses at Langley Air Force Base (AFB)**

Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of the removal of four houses in the Lighter Than Air portion of Langley AFB. These houses are contributing elements to the Langley Field Historic District. The analysis assesses the potential impacts to the Langley Field Historic District with the demolition of the houses and the effect on local landfill capacity. Alternatives evaluated included the relocation and rehabilitation of the four houses. The analysis also assesses the potential implications if no action were to be taken.

The Draft EA and a Draft Finding of No Significant Impact/Finding of No Practicable Alternative will be available for review beginning March 28, 2005 at the locations below. Comments should be submitted by April 26, 2005.

Poquoson Public Library	500 City Hall Avenue
Hampton Public Library	4207 Victoria Blvd
York County Public Library	100 Long Green Blvd
Bateman Library	42 Ash Avenue Langley AFB

To acquire more information or request a copy of the document, please contact Matt Goss. Written comments should be mailed to:

**1 CES/CEVQA
37 Sweeney Boulevard
Langley AFB, VA 23665-2107
ATTN: Matt Goss**

Public Notice Draft EA

**Department of Defense
Department of the Air Force
Notice of Availability of Finding of No Significant Impact/ Finding of No
Practicable Alternative and Final Environmental Assessments for the
Demolition of Facilities and Lighter Than Air Buildings 868, 869, 948, 949
and at Langley AFB, VA**

Langley Air Force Base (AFB) announces that a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) was signed on May 2, 2005 for an EA that analyzed the potential impacts of the demolition of five facilities at Langley AFB: Facility 731 - LOX Storage, Facility 732 - LOX Storage, Building 735 - Small Gas Engine Repair Shop, Building 1001 - Greenhouse, and Building 1033 - Security Police Operations. The analysis assessed the potential impacts to Langley Field Historic District with the demolition of the Greenhouse, a contributing element, and the effect of the demolitions on local landfill capacity. The action would not result in significant impacts to any resource area analyzed.

Langley AFB also announces that an FONSI/FONPA was signed on May 6, 2005 for an Environmental Assessment (EA) that analyzed potential impacts of the demolition of Buildings 868 869, 948, 949. The analysis assessed the potential impacts to Langley Field Historic District with the demolition of these houses which are contributing elements to the Historic District and the effect on local landfill capacity. The analysis also assessed the rehabilitation of the houses for residential or administrative use, the relocation of the houses off base and the No Action alternative. The action would not result in significant impacts to any resource area analyzed.

Copies of the documents are available for review, beginning May 20, 2005, at the locations listed below.

Poquoson Public Library	500 City Hall Ave.
Hampton Public Library	4207 Victoria Blvd.
York County Public Library	100 Long Green Blvd.
Bateman Library	42 Ash Ave Langley AFB

To request further information please contact Matt Goss at the address below.

**1 CES/CEVP
37 Sweeney Boulevard
Langley AFB, VA 23665
ATTN: Matt Goss**

Notice of Availability

APPENDIX B
PROGRAMMATIC AGREEMENT



COMMONWEALTH of VIRGINIA

Department of Historic Resources

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

December 22, 2004

Ms Laura Baie
Community Planner
1 CES/CECP
37 Sweeney Boulevard, Langley Air Force Base
Hampton, Virginia 23665

Re: Programmatic Agreement
Facilities 868, 869, 948, and 949
Langley Air Force Base
Hampton, Virginia
DHR File No. 2003-1241

Dear Ms Baie:

Enclosed please find a signed copy of the Programmatic Agreement (PA) for the above referenced project.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

PROGRAMMATIC AGREEMENT
BETWEEN
LANGLEY AIR FORCE BASE
AND
THE VIRGINIA DEPARTMENT OF HISTORIC RESOURCES
REGARDING
TREATMENT OF FACILITIES 868, 869, 948, & 949

WHEREAS, Langley Air Force Base (LAFB) finds that existing military family housing in Facilities 868, 869, 948, and 949 at Langley Air Force Base in the City of Hampton, Virginia no longer meet minimal Air Force housing standards; and

WHEREAS, LAFB proposes to carry out a program (hereafter, "Program") that will involve determination of the appropriate treatment for Facilities 868, 869, 948, and 949, and

WHEREAS, the Program at LAFB includes the potential demolition of the four units, relocation of the units, or reuse of the buildings as described below, and

WHEREAS, LAFB in consultation with the Virginia Department of Historic Resources (SHPO) has established the Program's Area of Potential Effect (APE) as defined at 36 CFR Part 800.16(d), to be the Langley Field Historic District (hereafter, "District"), which is eligible for listing in the National Register of Historic Places (hereafter, "National Register"), and is depicted on the map included at Appendix A of this Programmatic Agreement (hereafter, "Agreement"), and

WHEREAS, LAFB has determined the Program may have an adverse effect on the Historic District, and specifically on Facilities 868 and 869, Officer's Quarters constructed in 1923, and 948 and 949, constructed as Non-Commissioned Officers Bachelor's Quarters in 1921, all of which are contributing properties in the District, and

WHEREAS, as part of the Program, LAFB is considering alternative treatments for the demolition of the facilities, and a study has been provided for SHPO review that provides recommendations for alternative treatments (hereafter, "alternatives analysis"); and

WHEREAS, LAFB has recently conducted an Identification (Phase I) archaeological survey of Langley Air Force Base, and

WHEREAS, LAFB has consulted with the SHPO, in accordance with Section 106 of the National Historic Preservation Act, 16 U.S.C. § (NHPA) and its implementing

regulations (36 CFR Part 800.6(b)(2)) to address the adverse effect resulting from actions carried out as part of the Program, and

WHEREAS, LAFB has provided notification to the Advisory Council on Historic Preservation (Council), pursuant to 36 C.F.R. 800.6(a)(1) and has invited the Virginia Council on Indians and two local organizations to participate in the consultation, to include the Hampton History Museum, and the Hampton Historical Society, and

WHEREAS, as of 13 Oct 04 both the Advisory Council and the Hampton History Museum have declined to participate in the consultation, and

WHEREAS, LAFB intends to use the provisions of this Agreement, and the completion of an Environmental Assessment of the Program, to address applicable requirements of Sections 110(a)(1) and 110(b) of the NHPA, Section 106 of the NHPA, and 32 CFR 989 of the National Environmental Policy Act (NEPA);

NOW, THEREFORE, LAFB and the SHPO agree that upon LAFB's decision to proceed with the Program, LAFB shall ensure the following stipulations are implemented in order to take into account the effect of the Program on historic properties, and these stipulations shall govern the Program and all of its parts until this Agreement expires or is terminated.

Stipulations

LAFB shall ensure that the following stipulations are implemented.

I. Treatment of Alternatives for Facilities 868, 869, 948, and 949:

A. LAFB shall provide the SHPO a copy of the alternatives analysis for Facilities 868, 869, 948, and 949 for review and comment. LAFB shall consult with the SHPO concerning the recommendations proposed in the alternatives analysis for the buildings, and shall consider the SHPO's comments on the alternatives analysis in making a decision concerning the selected treatment for the four houses.

B. LAFB will choose one of the following options when considering its course of action regarding the treatment of Facilities 868, 869, 948, and 949:

1. LAFB may rehabilitate the units for continued use as active housing stock. If rehabilitation is chosen, LAFB shall implement the following actions:
 - a. All rehabilitation will be undertaken in a manner sensitive to the buildings' historic fabric, using historic photographs of the facility as a guide, and shall follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

- b. The chosen rehabilitation proposal will be provided to the SHPO for review and approval.
- 2. LAFB may rehabilitate the facilities for some non-residential use. Non-residential uses might vary from administrative or office space for base organizations or clubs, for some museum-type use, or to serve as a retail-type facility. These alternatives could be adapted into the overall site plan for the renovation of Bayview Towers.
 - a. All rehabilitation plans will be undertaken in a manner sensitive to the buildings' historic fabric, and shall follow the Secretary of the Interior's Standards for the Treatment of Historic Properties.
 - b. The chosen rehabilitation proposal will be provided to the SHPO for review and approval.
- 3. LAFB shall seek proposals from parties (to include local community organizations, through auction or donation to a developer, organization, or individual) interested in the relocation and reuse of the units at an off-base location. The relocated facilities could serve as a housing or non housing use, but should be consistent with off-base residential and or commercial reuses (such as office space, gift shops, boutiques, etc.)
 - a. LAFB shall seek local government entities, organizations, and individuals likely to be interested in the four units to see if they have ideas and/or information about dismantling, relocating, or reusing the units on base. LAFB shall provide information to the SHPO regarding parties contacted in this regard.
 - b. If the relocation option is chosen, and a party interested in relocating the units is identified, LAFB shall establish, in consultation with the SHPO, criteria for evaluating proposals received for the relocation and reuse of the four units and shall determine which, if any, proposals for the units should be accepted. The criteria for proposal evaluation should be geared towards the protection of the recognized historic resources and should include:
 - 1) the relocation and reuse of the four units within the surrounding community, such as the City of Hampton;
 - 2) the ability of an interested party to ensure the long-term preservation of the four units;
 - 3) the financial ability of an interested party to relocate, maintain, preserve, or salvage the four units;

4) the number of facilities to be relocated; and

5) the location to which the four units are proposed to be relocated.

- c. A reasonable effort to accomplish the relocation and reuse of the four units by identifying potential interested agencies shall be made. All information regarding proposals to relocate the units shall be forwarded to the SHPO along with any correspondence regarding declines to the proposal.
- d. If accepted, new owners of the facilities should be educated as to the requirements for rehabilitating the units in a manner sensitive to the buildings' historic fabric, and guided to follow the Secretary of the Interior's Standards for Treatment of Historic Properties. New owners should be provided with all information available regarding the units, including historic photos, elevation and site plan drawings, and other historical information.
- e. Prior to any relocation of the subject facilities, LAFB shall implement the mitigation described in item IIB, below, as agreed to by both LAFB and the SHPO.

4. Should LAFB determine the rehabilitation or relocation of Facilities 868, 869, 948, and 949 cannot be completed in an economically feasible manner that meets Air Force mission requirements, all four facilities shall be demolished.. LAFB shall afford the SHPO an opportunity to review and comment on any plans to redevelop the program site, and shall take the SHPO's comments into account as discussed in item IIB below.

C. Should LAFB decide to demolish Facilities 868, 869, 948, and 949, LAFB shall implement the mitigation described in item II, below.

II. Recordation and Other Mitigation

A. Recordation

1. Prior to any demolition or relocation of the subject facilities, LAFB shall document Facilities 868, 869, 948, and 949 through preparation of the following materials:

- Site Plan drawings of the facilities.
- 5" x 7" medium format black and white photos of the buildings' exteriors and interiors printed on black and white photographic paper, and showing overall views to include exterior elevations and detail views of significant exterior and interior features of the structures.
- Concise description and statements of significance for the buildings, placing the buildings within the context of the draft National Register nomination for the Historic District

- Completion of the SHPO's Intensive Level Survey Field Form and accompanying documentation materials, according to current SHPO standards, and data entry of the survey information into the SHPO's Data Sharing System (DSS) program.
2. LAFB shall provide these draft documentation materials to the SHPO for review and approval prior to demolition.
 3. LAFB shall provide two sets of recordation materials for this facility to the SHPO for permanent storage and one set to the Office of the Command Historian, HQ Air Combat Command. LAFB shall further offer a copy of said documentation to the City of Hampton Public Library or other City of Hampton organizations as identified in an effort to make these recordation materials more readily accessible to the public.

B. Other Mitigation

1. LAFB, in consultation with the SHPO, shall strive to obtain funds to rehabilitate Facility 700, the old base fire station, a contributing building in the historic district. If funding can be obtained, LAFB shall return this facility to the condition depicted in historic photographs, following The Secretary of the Interior's Standards for the Treatment of Historic Properties, contingent upon availability of funding.
2. LAFB shall provide plans for the rehabilitation of Facility 700 to the SHPO for review and approval of the project designs prior to beginning construction.
3. LAFB shall further mitigate the demolitions by highlighting historic buildings and structures in its annual Historic Preservation Week. LAFB shall provide a copy of the plans for Preservation Week to the SHPO to document this has been done.
4. Any proposed new construction at the program site must be consistent with the LAFB architectural standards for construction within the Langley Field Historic District, and shall provide any such plans for review by the SHPO for compatibility with the Langley Field Historic District. The SHPO shall be given the opportunity to review and comment on construction drawings.

III. Unexpected Discoveries and Archeological Resource Responsibilities

LAFB shall ensure all relevant construction documents contain the following provisions:

- A. In the event a previously unidentified archaeological resource is discovered during ground disturbing activities associated with the demolition or relocation of the four units, all construction work involving subsurface disturbance will be halted in the area of the resource and in the surrounding area where further subsurface remains can reasonably be expected to occur. The Contractor shall immediately notify LAFB, who shall notify the SHPO within 48 hours of discovery. LAFB and the SHPO, or an archeologist meeting *The Secretary of Interior's Qualifications Standards*, will inspect the work site and

determine the nature and area of the affected archeological resource and assess whether further investigations are warranted. Work may then continue in the project area outside the site area.

B. LAFB will consult with the SHPO to determine the National Register eligibility of the previously unidentified resource. The SHPO will respond within two business days of receipt of the documentation. The documentation may be submitted electronically. Potentially eligible historic properties will be evaluated using the National Register criteria in accordance with 36 CFR 800.4(c). If it is determined the resource meets the National Register Criteria (36 CFR Part 60.6), LAFB shall ensure compliance with Section 800.13 of the Council's Regulations. The SHPO shall provide comments on any treatment plan submitted within two business days of receipt. LAFB shall take into account the SHPO's recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. LAFB shall provide the SHPO a report of these actions once they are completed. If the SHPO fails to comment, LAFB may assume concurrence and implement the plan. Work in the affected area shall not proceed until both the development and implementation of an appropriate treatment plan; or the determination is made that the located resource is not eligible for inclusion on the National Register.

1. Human Remains and associated funerary objects encountered during the course of actions taken as a result of this Agreement shall be treated consistent with the provisions of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001), 43 CFR 10, and Air Force Instruction 32-7065, Cultural Resources Management.

C. If archeological resources are found during demolition/relocation activities and LAFB determines in consultation with the SHPO that further archaeological investigations are needed in connection with the demolition or relocation of the units, LAFB shall prepare and implement a program to identify and evaluate archeological sites within the project area. The area to be investigated shall be determined by LAFB in consultation with the SHPO. The program shall be of sufficient intensity to provide an evaluation of eligibility for the National Register of Historic Places by LAFB in consultation with the SHPO following the regulations outlined in 36 CFR 800.4 (c).

All data recovery plans prepared under the terms of this agreement, if any, shall include the following elements:

- Information on the archaeological property or properties where data recovery is to be carried out, and the context in which such properties are eligible for the National Register;
- Information on any property, properties, or portions of properties that will be destroyed without data recovery;

- Discussion of the research questions to be addressed through the data recovery, with an explanation/justification of their relevance and importance;
- Description of the recovery methods to be used, with an explanation of their pertinence to the research questions;
- Information on arrangements for any regular progress reports or meetings to keep LAFB and the SHPO up to date on the course of the work. The plan should contain the expected timetable for excavation, analysis and preparation of the final report. LAFB shall notify the SHPO in writing once the fieldwork portion of the data recovery program is complete so a site visit may be scheduled, if the SHPO finds it appropriate. The proposed construction may proceed following this notification while the technical report is in preparation.
- Description of the proposed disposition of recovered materials and records.
- Proposed methods for disseminating results of the work to the interested public (e.g. slide packet for use in the local schools, an exhibit in the local libraries during Virginia Archaeology Month, etc.); and
- Proposed methods by which the Virginia Council on Indians (VCI) and (any relevant Indian tribe/s), and other specific groups/interested parties will be kept informed of the work.

All archeological work, including data recovery plan(s), shall be consistent with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 4434-37) and the Virginia SHPO's *Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44742, September 29, 1983) (1999, rev. 2000) and take into account the Council's publication, *Consulting About Archeology Under Section 106* (1990).

All archeological materials and appropriate field and research notes, maps, drawing and photographic records collected as part of this project (with the exception of human skeletal remains) will be cared for in a repository in accordance with the requirements in 36 CFR Part 79, *Curation of Federally Owned and Administered Archeological Collections*.

All technical reports prepared pursuant to this agreement will be consistent with the federal standards entitled *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-44742, September 29, 1983) and SHPO guidelines.

1. Professional Qualifications

- a. All archeological work will be conducted by or under the direct supervision of a qualified archeologist who meets, at a minimum, the qualifications set

forth in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

b. Work concerning historic structures and districts will be carried out by or under the supervision of a qualified architectural historian(s) who meets, at a minimum the qualifications set forth in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

2. Review of Documentation.

a. The SHPO agrees to review all documentation submitted within thirty (30) days. If the SHPO does not provide comments within the thirty (30) days of confirmed receipt, LAFB may assume SHPO approval of the documentation.

IV. Dispute Resolution

A. Should any party to this Agreement object in writing to LAFB regarding any action carried out or proposed with respect to the undertaking or implementation of this Agreement, LAFB shall consult with the objecting party to resolve the objection. If after initiating such consultation LAFB determines the objection cannot be resolved through consultation, LAFB shall forward all documentation relevant to the objection to the Council, including LAFB's proposed response to the objection. Within thirty days after receipt of all pertinent documentation, the Council shall exercise one of the following options:

1. Advise LAFB the Council concurs in LAFB's proposed response to the objection, whereupon the agency will respond to the objection accordingly;
2. Provide LAFB with recommendations, which LAFB shall take into account in reaching a final decision regarding its response to the objection; or
3. Notify LAFB the objection will be referred for comment pursuant to 36 CFR 800.7(a)(4), and proceed to refer the objection and comment. LAFB shall take the resulting comment into account in accordance with 36 CFR 800.7(c)(4) and Section 110(l) of the NHPA.

B. Should the Council not exercise one of the above options within thirty days after receipt of all pertinent documentation, LAFB may assume the Council's concurrence in its proposed response to the objection.

C. LAFB shall take into account any Council recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; LAFB's responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.

D. At any time during implementation of the measures stipulated in this Agreement, should an objection pertaining to this Agreement or the effect of any individual undertaking on historic properties be raised by a member of the public, LAFB shall notify the parties to this Agreement and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this Agreement to resolve the objection.

V. Amendments and Termination

A. Any party to this Agreement may request that it be amended, whereupon the parties shall consult in accordance with 36 CFR 800.13 to consider such an amendment.

B. If LAFB determines it cannot implement the terms of this Agreement, or if the SHPO or the Council determines the Agreement is not being properly implemented, LAFB, the SHPO or the Council may propose to the other parties that it be terminated.

C. Termination shall include the submission of any outstanding documentation on any work done up to and including the date of termination.

D. A party proposing to terminate this Agreement shall so notify all parties to the Agreement, explaining the reasons for termination and affording them at least thirty days to consult and seek alternatives to termination. The parties shall then consult.

E. Should such consultation fail and the Agreement be terminated, LAFB shall comply with 36 CFR 800.3 through 800.6 with regard to individual actions covered by this Agreement

VI. Duration of the Agreement

This Agreement will continue in full force and effect until five years after the date of the last signature. At any time in the sixth-month period prior to such date, LAFB may request the SHPO to consider an extension or modification of this Agreement. No extension or modification will be effective unless all parties to the Agreement have agreed with it in writing.

VII. Execution

Execution of this Agreement by LAFB and the SHPO, and its submission to the Advisory Council on Historic Preservation (Council) in accordance with 36 CFR 800.6(b)(1)(iv), shall, pursuant to 36 CFR 800.6(c), be considered to be an agreement with the Council for the purposes of Section 110(l) of NHPA. Execution and submission of this Agreement, and implementation of its terms, shall serve as evidence that LAFB has afforded the Council an opportunity to comment on the Program and its effects on historic properties, and LAFB has taken into account the effects of the Program on historic properties.

LANGLEY AIR FORCE BASE

By: Frank Gorenc

Date: 23 Nov 2004

FRANK GORENC, Colonel, USAF
Commander, 1st Fighter Wing

VIRGINIA DEPARTMENT OF HISTORIC RESOURCES

By: Kathleen S. Kilpatrick

Date: 12/22/04

KATHLEEN S. KILPATRICK
Director and State Historic Preservation Officer

[illegible]

SOUTHWEST

APPENDIX C
FEDERAL AGENCY COASTAL ZONE
MANAGEMENT ACT (CZMA)
CONSISTENCY DETERMINATION

APPENDIX C: FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

INTRODUCTION

This document provides the Commonwealth of Virginia with the U.S. Air Force's Consistency Determination under CZMA Section 307 and 15 C.F.R. Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 C.F.R. Part 930.39.

Pursuant to Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, as amended, its implementing regulations at 15 C.F.R. Part 930, this is a Federal Consistency Determination for activities described within the Langley AFB Demolition Of Lighter Than Air (LTA) Buildings 868, 869, 948, 949 Environmental Assessment (Chapter 2.0 of the document).

Proposed Federal Agency Action

The Proposed Action of the EA is to demolish Buildings 868, 869, 948, and 949 in the Lighter Than Air section of Langley AFB . The U.S. Air Force has evaluated the Proposed Action and Alternatives for potential effects to the land or water uses or natural resources of the Commonwealth's coastal zone within the context of the statutes listed in the Virginia Coastal Resources Management Program (below).

Federal Consistency Review

Statutes addressed as part of the Virginia Coastal Resources Management Program consistency review and considered in the analysis of the Proposed Action are discussed in the following table.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<i>Fisheries Management</i> Virginia Administrative Code 28.2-200 to 28.2-713 (Virginia Marine Resources Commission) and 29.1-100 to 29.1-570 (Department of Game and Inland Fisheries) State Tributyltin (TBT) Program. VAC 3.1-249.59 to 3.1-249.62	Stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities.	Fisheries would not be affected by the Proposed Action.
<i>Subaqueous Lands Management</i> Virginia Administrative Code Section 28.2-1200 to 28.2-1213	Establishes the conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits and water quality standards established by the Virginia Department of Environmental Quality.	No aspects of the Proposed Action occur in state waters. There will be no dredge and fill operations. The Proposed Action would not involve the use of state submerged lands.
<i>Wetlands Management</i> The tidal wetlands program is administered by the Virginia Marine Resources Commission; Virginia Administrative Code 28.2-1301 to 28.2-1320. The Virginia Water Protection Permit program administered by VDEQ includes protection of wetlands – both tidal and non-tidal; Virginia Administrative Code 62.1-44.15.5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.	Preserves tidal wetlands, prevent their Destruction, and accommodate economic development in a manner consistent with wetlands preservation. Also, establishes a Water Quality Certification program consistent with Section 401 of the Clean Water Act.	The Proposed Action would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. There would be no significant impacts to wetlands from the implementation of the Proposed Action since all development would be in areas not delineated as wetlands. Standard practices would be applied to control sedimentation and erosion during construction, renovation, and demolition, thereby avoiding secondary effects to any nearby wetlands or freshwater aquatic communities.
<i>Dunes Management</i> Virginia Administrative Code 28.2-1400 through 28.2-1420 (Marine Resources Commission)	Provides for protection of primary dunes as contained in the Coastal Primary Sand Dune Protection Act	The proposed project will not adversely affect beach and shore management, nor impact any primary dunes as defined by the Coastal Primary Sand Dune Act. There are no sand-covered beaches or sand dunes in the vicinity of this project.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<i>Non-point Source Pollution Control</i> Virginia Administrative Code Sections 10.1-560 et seq (Department of Conservation and Recreation)	Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation (Virginia Administrative Code Section 10.1-560 et seq).	The Proposed Action would result in minor soil erosion and increases in turbidity from soil erosion. Standard construction practices for preventing and controlling erosion would be necessary and are described in Chapter 4.3 of the document.
<i>Point Source Pollution Control</i> Virginia Administrative Code 62.1-44.15 (State Water Control Board)	The point source program is administered by the State Water Control Board pursuant to Virginia Administrative Code Section 62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program.	No point source discharges into surface water or effects to public drinking water supplies would occur from the Proposed Action.
<i>Shoreline Sanitation</i> Virginia Administrative Code Sections 32.1-164 through 32.1-165 (Virginia Department of Health)	Regulates the installation of septic tanks, sets standards concerning soil types suitable for septic tanks, and specifies minimum distances for placement from streams, rivers and other State Waters	Installation of Septic Tank Systems are not contained in this proposal. All sanitary sewage will be routed to an on-base central sewage collection system and treated at the Hampton Roads Sanitation District's regional wastewater treatment facility.
<i>Air Pollution Control</i> Virginia Administrative Code Section 10-1.1300 to 10-1.1320 (State Air Pollution Control Board)	Implements the Federal Clean Air Act to provide the legally enforceable State Implementation Plan for the attainment of the National Ambient Air Quality Standards.	The Proposed Action would generate minor air emissions.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<i>Coastal Lands Management</i> Virginia Administrative Code Sections 10.1-2100 to 10.1-2114 and Virginia Administrative Code 10-20-10 et seq. (Chesapeake Bay Local Assistance Department and 84 localities in Tidewater Virginia)	A state-local cooperative program pursuant to the Chesapeake Bay Preservation Act and Chesapeake Bay Preservations and Management Regulations to regulate activities in the Chesapeake Bay Resource Management Areas The main goal of this program is protect and restore coastal resources, habitats, and species of the Commonwealth. These include, but are not limited to, wetlands, subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources, riparian forested buffers, and endangered or threatened species	State, Federal, and regional agencies will be provided the opportunity to review the environmental assessment. The Proposed Action, which occurs primarily on federal property, conforms to the requirements of the Chesapeake Bay Preservation and Management Regulations.

Pursuant to 15 C.F.R. § 930.41, the Commonwealth of Virginia Clearinghouse has 60 days from receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension, in writing, under 15 C.F.R. § 930.41(b). Virginia's concurrence will be presumed if its response is not received by 1 FW on the 60th day from receipt of this determination.